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the American Perfumer and ESSENTIAL OIL REVIEW

COSMETICS · SOAPS · FLAVORS

Toni CREME SHAMPOO

repeats success of the famous TONI HOME PERMANENT

. . . and Wirz is glad to participate in the production of this handsome collapsible metal tube with its eye-compelling design, its good taste and "quality" feeling. Designed to be a member of the "Toni family of products", and an important element in the over-all Toni merchandising plan, Toni Creme Shampoo met instant favor with women everywhere. Wirz Tubes have proven themselves valuable merchandising aids as well as practical containers for a variety of creams, pastes, powders, greases and semi-liquids. If you have a product of this type, consider Wirz Tubes. They'll assure protection—convenience and sales appeal. Call or write our nearest representative today.

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Prepared by a unique extraction process developed in our modern Grasse Laboratories, these superior natural concentrates impart to the base a delicate floral effect so much appreciated in modern perfume compounds, and often characterized as the much sought after finished note. They are partially dewaxed, lighter in color and represent a concentration between the Hyperessence and the Integral Essence extractive.

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The volatile solvent process by which these products are prepared was revamped and brought to its highest state of development by Eugene Charabot with his unique methods and technical equipment. These Hyperessences are natural products in a superlative and concentrated form, and they retain the finer shadatives which are inevitably lost by less perfect methods of production. They represent the highest perfection attainable today in the adaptation of natural products to the use of the perfumer and are inimitable in quality.

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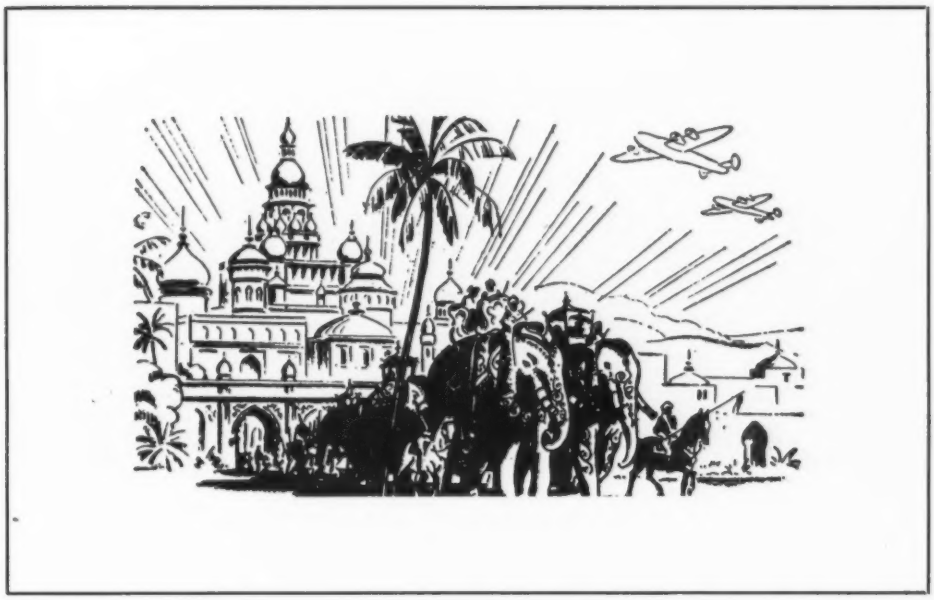

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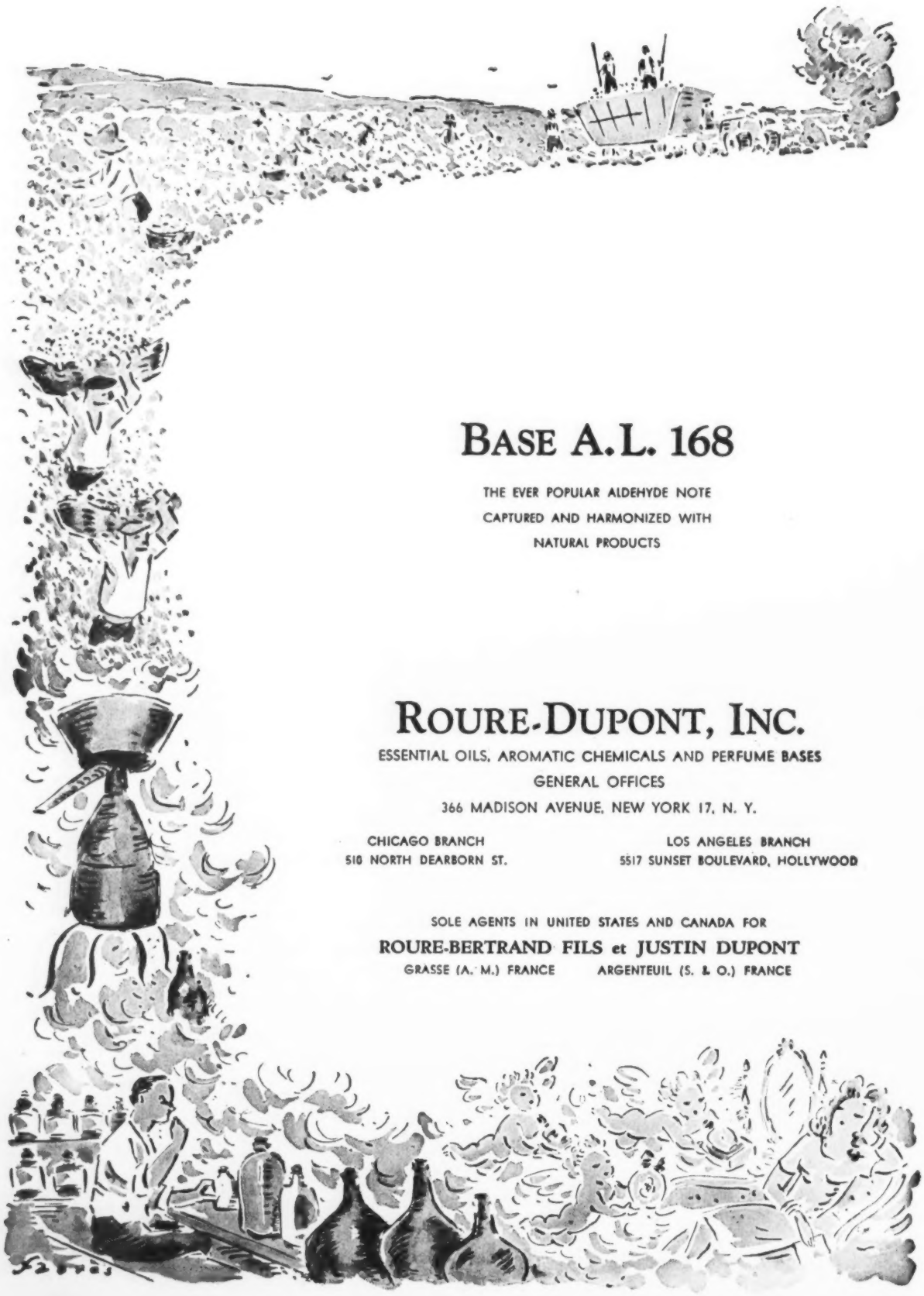
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for perfume, toilet water and cosmetic products

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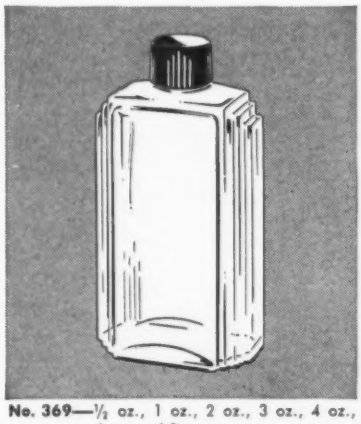
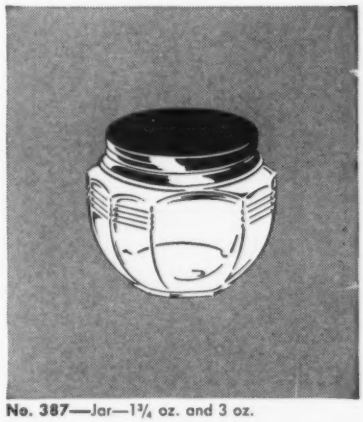
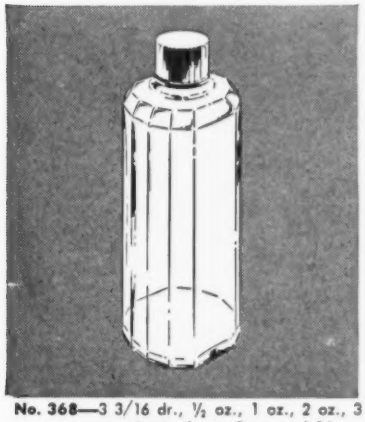


No. 369—½ oz., 1 oz., 2 oz., 3 oz., 4 oz., 6 oz. and 8 oz.

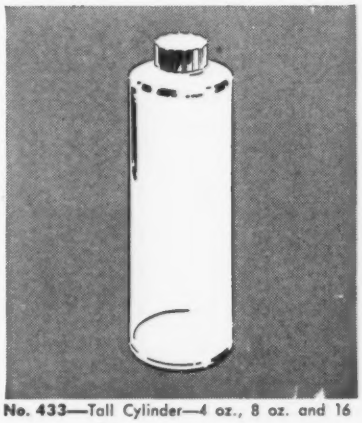


No. 387—Jar—1¾ oz. and 3 oz.

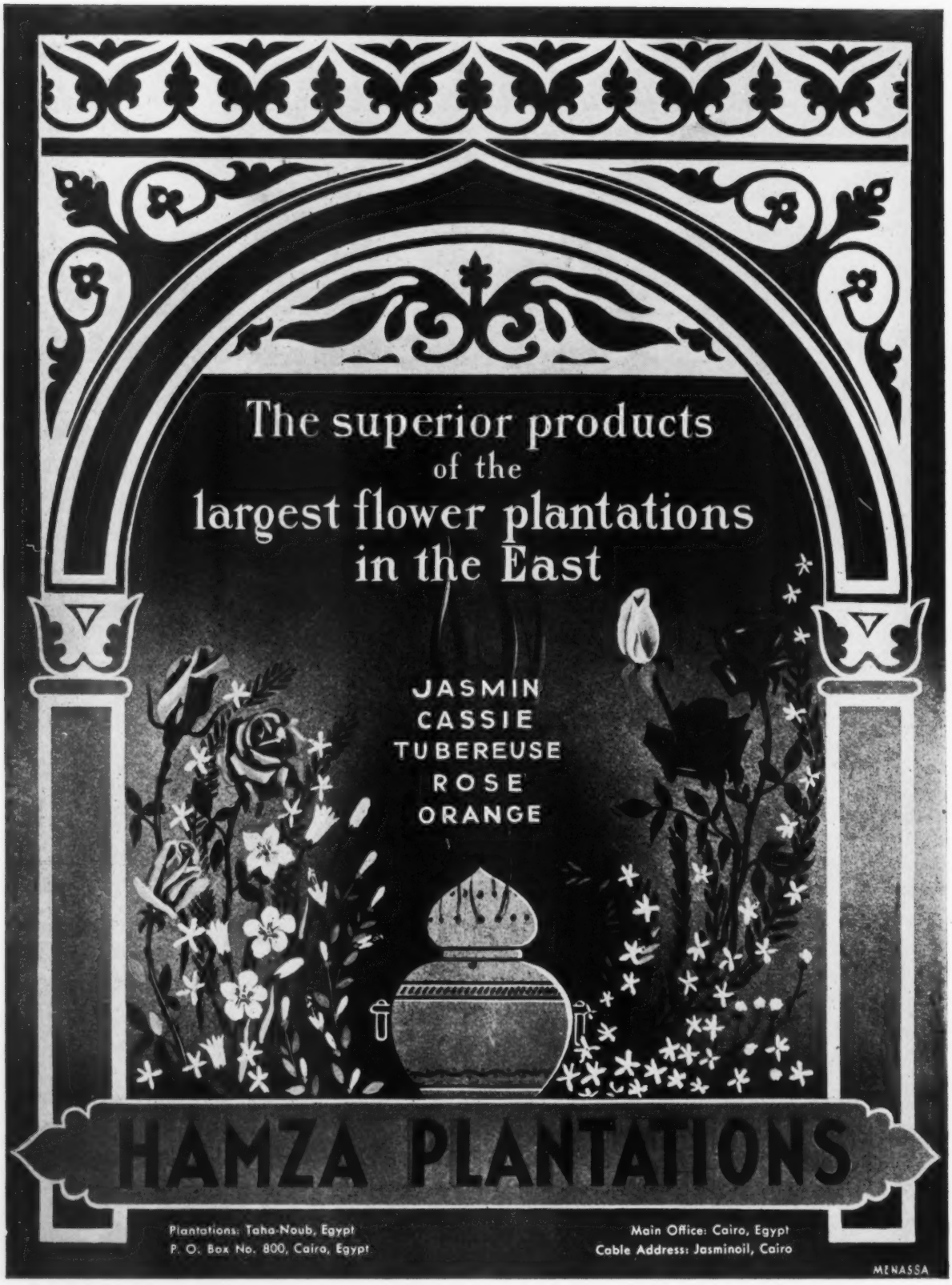


No. 368—3 3/16 dr., ½ oz., 1 oz., 2 oz., 3 oz., 4 oz., 6 oz., 8 oz. and 16 oz. Also made in Squat Style in 1 oz. and 2 oz.

No. 408—2 dr., ½ oz., 1 oz., 2 oz., 4 oz., 6 oz. and 8 oz. Also 6 oz. Wide Mouth.



No. 433—Tall Cylinder—4 oz., 8 oz. and 16 oz.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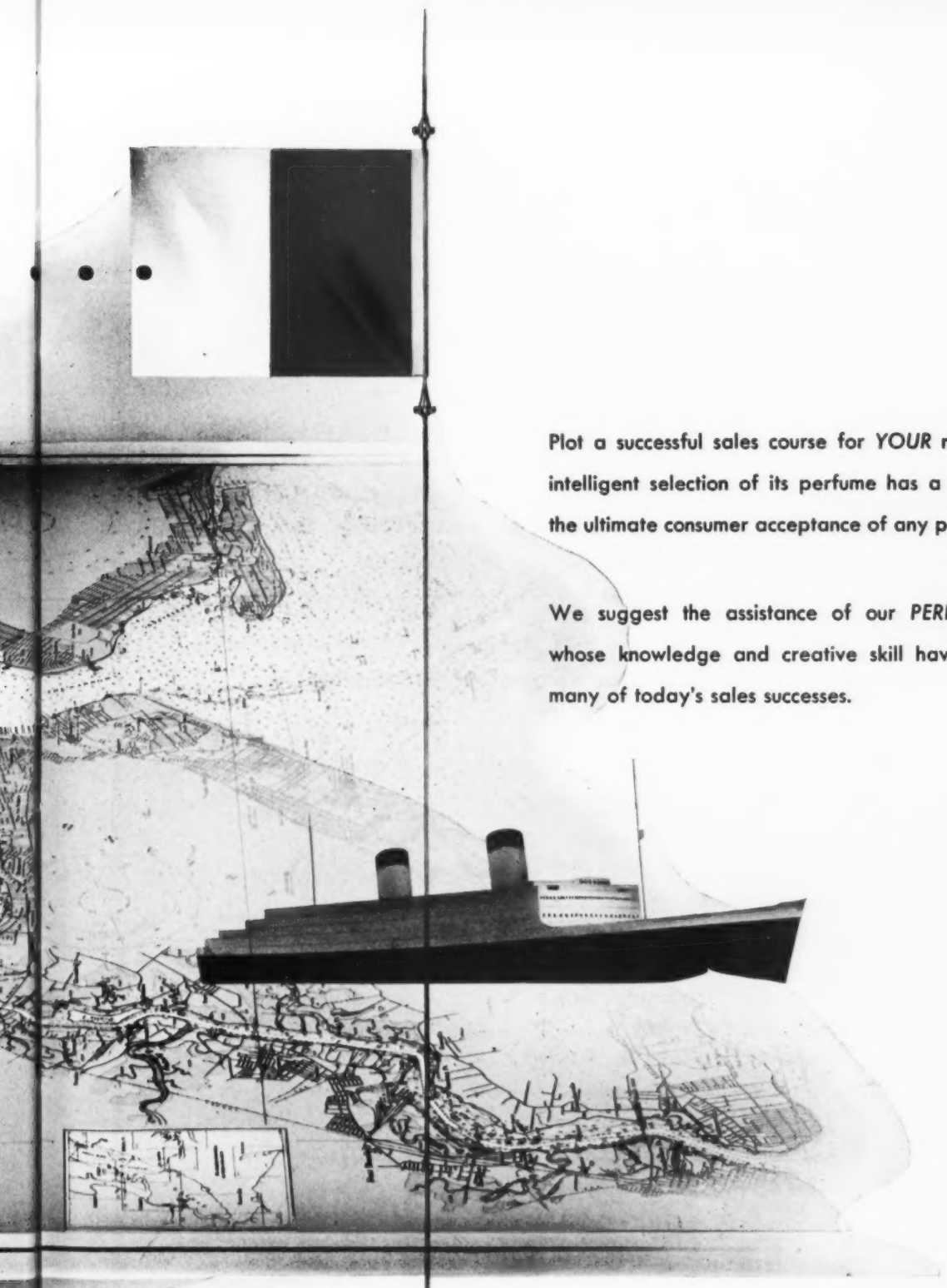

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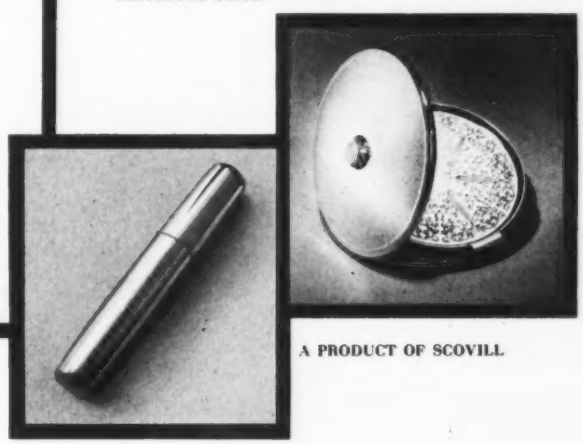

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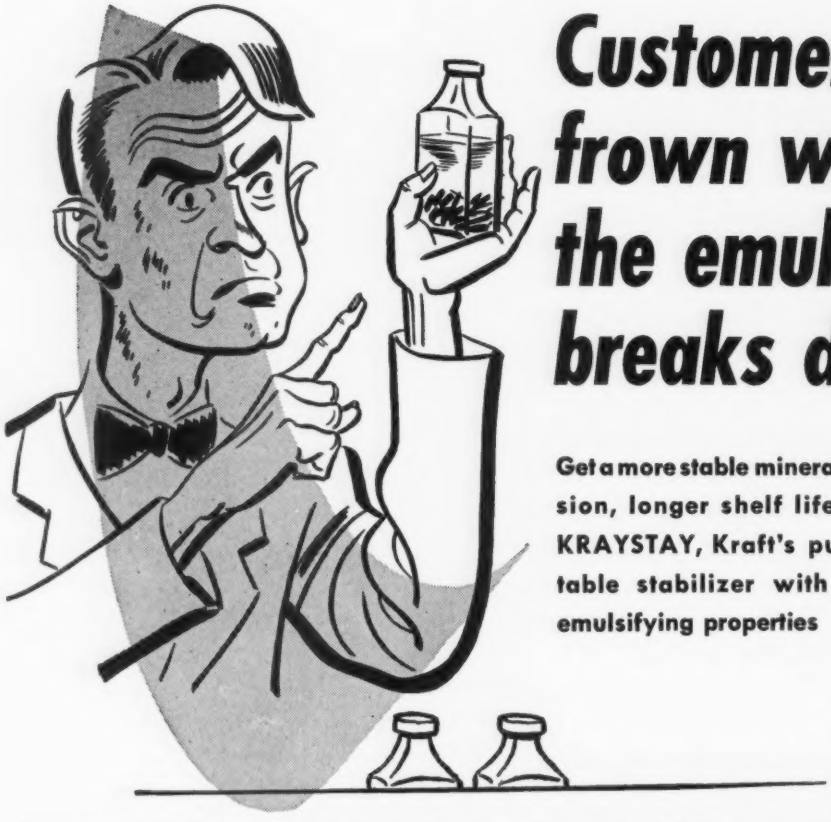

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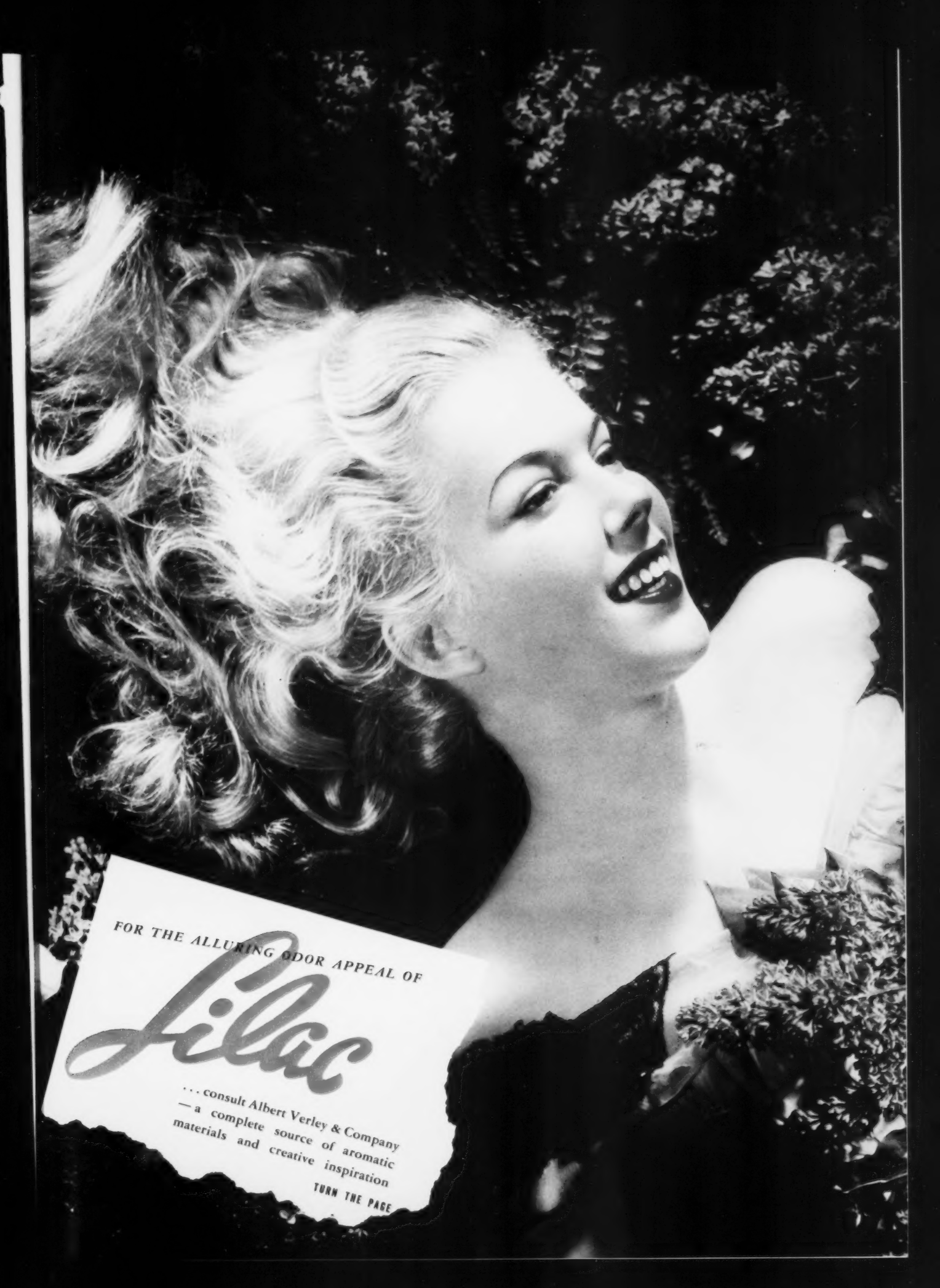
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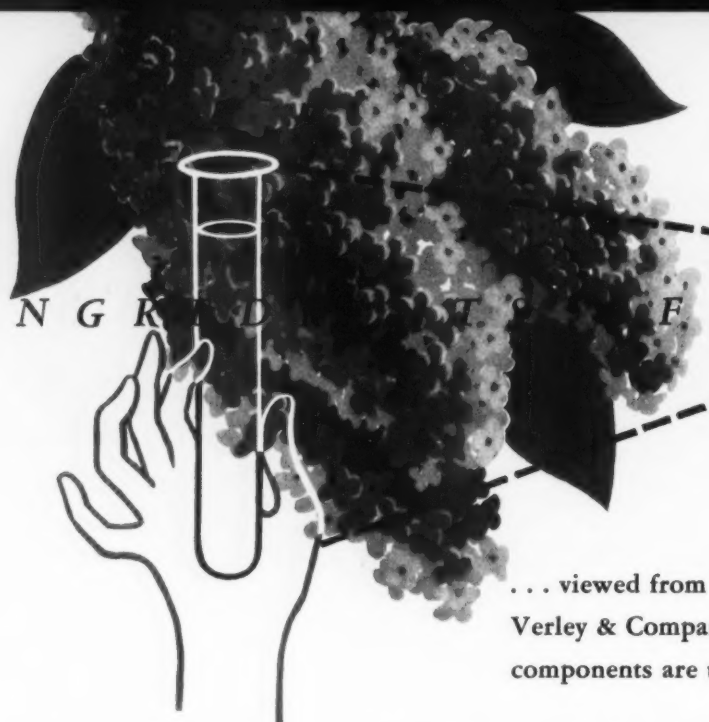

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. . . viewed from the standpoint of Albert Verley & Company's complete service, odor components are truly that

No lesser conception of the place of aromatic materials in the perfume and cosmetics industry could justify the many years of planning, research, and creative effort which have gone into the development of our comprehensive service and facilities — including materials in any desired stage of fabrication up to the finished composition, and counsel to aid in the constant search for new ideas and effects.

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by Albert Verley & Company

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A fine aromatic substance, matching the fragrance of the natural product with uncanny fidelity. A smooth blender with excellent fixative value — suitable for all types of perfumery.

AUBEPINE
A splendid soft, dry character.

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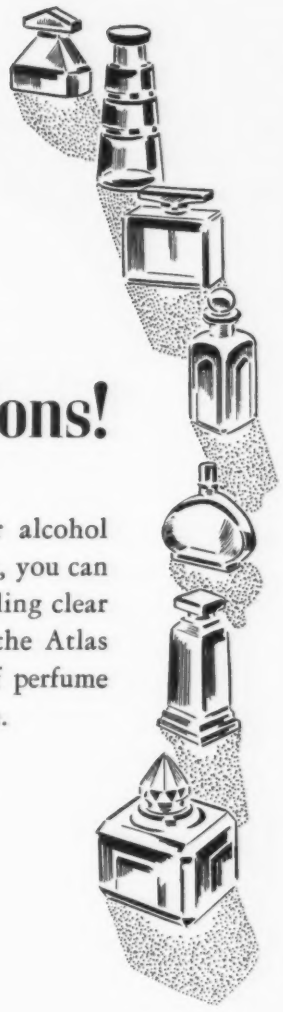

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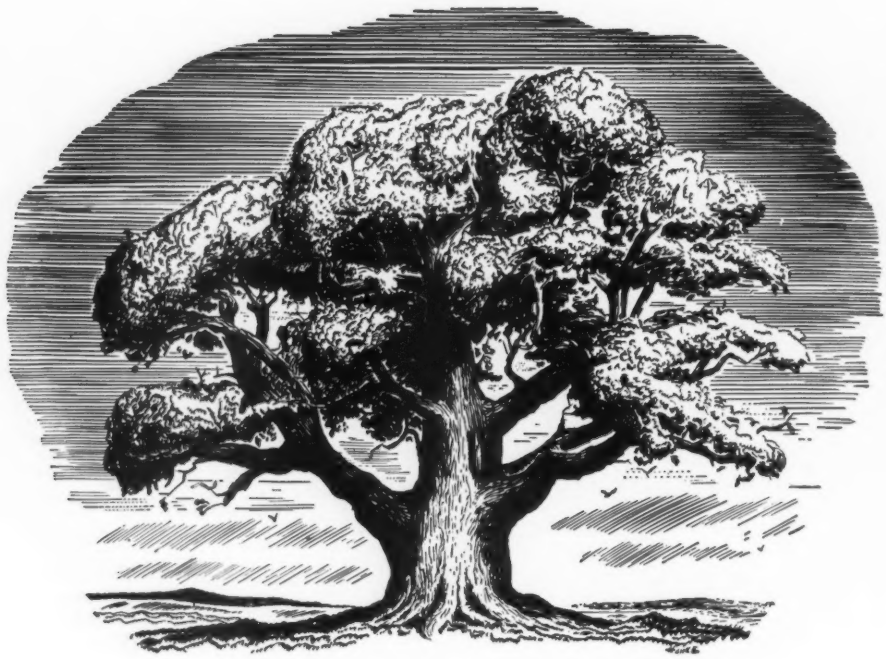

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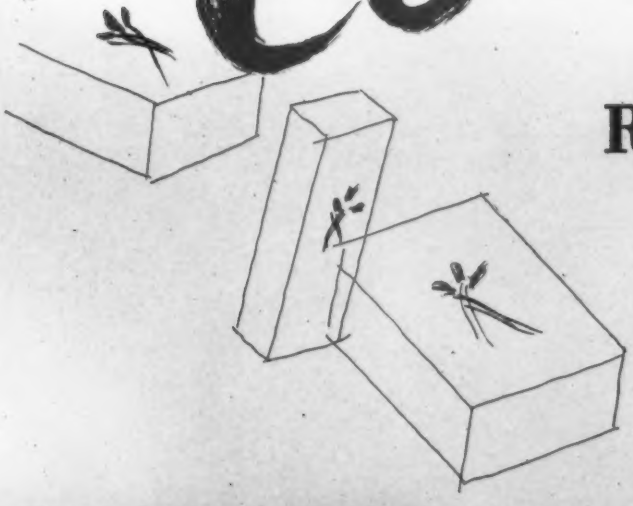

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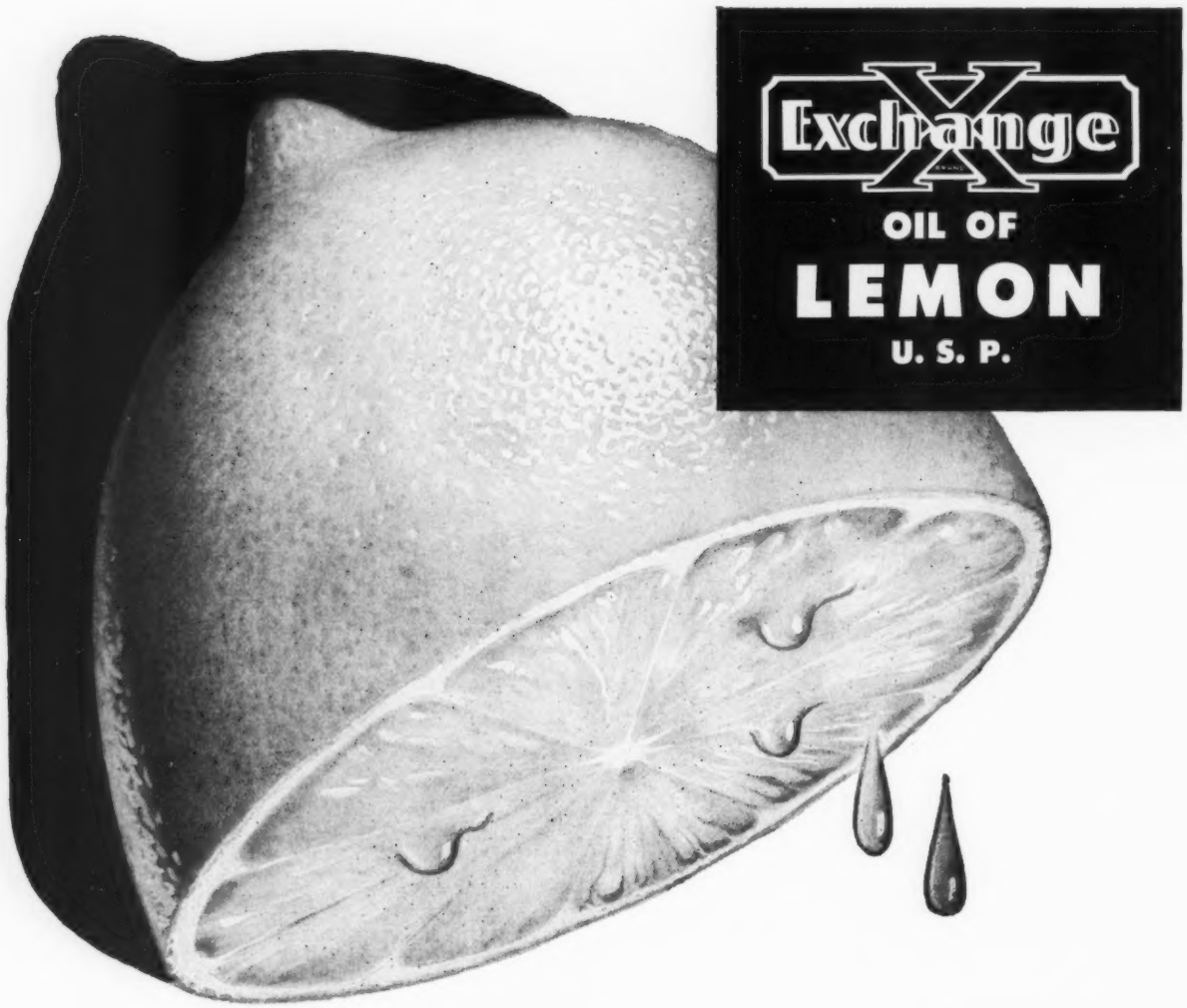

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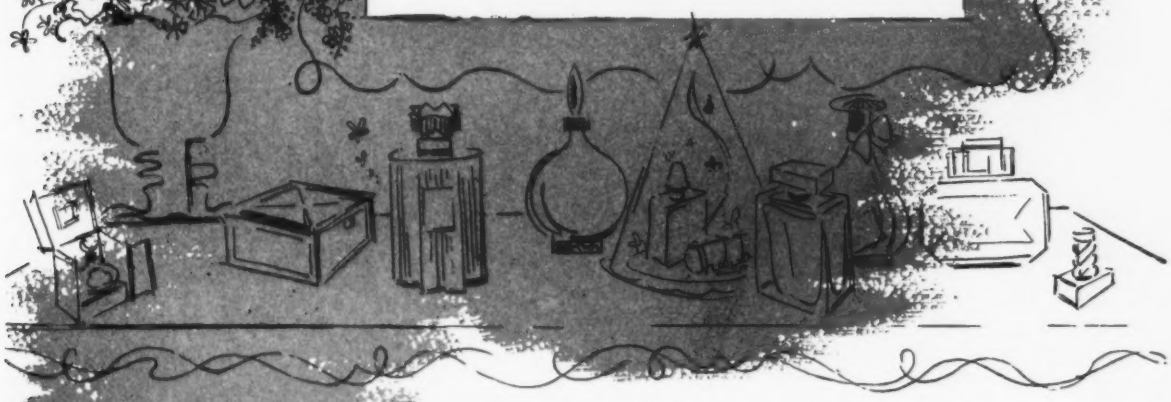

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Editorial Comment

Time For a Second Look

The girl behind the counter, once so blissfully contemptuous of the customer, is being intensively retrained in courtesy, customer psychology, tie-in sales . . .

The active promotion of fragrances is beginning to show its effect. From various parts of the country, reports are coming in showing that merchandising of fragrances is being put on a solid and productive basis. That's the bright side of the picture.

However, manufacturers and merchants are missing a lot of bets on how to get customers into the stores and influencing them to buy. Campaigns are instituted and then left dangling. Ineffectually spending money without producing results for a profit. There is a weakness on local advertising. It has been proved over and over that National advertising is not enough. It must be coordinated with local advertising to be fully effective.

Point-of-purchase display does some phenomenal things in boosting sales, as has been demonstrated in one test after another. Yet many times an extravagant window display is counted upon to carry the burden of sales, with no *inside* tie-in.

There appears to be an increased tendency to turn counters into stockrooms. The idea of mass display, while perfectly acceptable in certain types of operation, may be effective for a special promotion on a single line, but when a customer approaches a cosmetic section and finds herself gazing at an overpowering display of practically every size bottle, box and package of every line in stock, it's a little difficult for her to make up her mind on what to buy.

With the exception of special sales, and hard-hitters like Toni and Powers, about the only lines making real gains are those about which phenomenal statements can be made.

While some solid ground has been regained by manufacturers and merchants, there is still room for improvement.

Outstanding—

Ammonium Thioglycollate

by Summit

THE opposite number of the swift and fabulous growth of cold wave is the growth of Ammonium Thioglycollate by Summit, the basic material of the largest-selling and best-known cold wave solutions on the market.

Summit took Ammonium Thioglycollate off the laboratory shelf. By intensive and protracted research, the laboratory curiosity was developed into the commercial product that is enhancing the hair-dos of millions of women. The gleam in a chemist's eye was translated into a material, the demand for which taxes to the utmost the facilities of a large and modernly-equipped plant.

The factor responsible for the outstanding position achieved by Ammonium Thioglycollate by Summit in the cold wave industry is *Purity*. The purity of Ammonium Thioglycollate by Summit is reflected in the stability of the solutions in which it is used—in their complete freedom from objectionable odors and discoloration—in their toxic innocuousness—in the tightness and the lasting property of the curl that they yield.

The purity of Ammonium Thioglycollate by Summit is no happenstance. It is the pay-off of the unremitting care exercised in analyzing the raw materials entering into the product; of the rigid control of each step in production; of the searching tests that are made of each batch of finished product. Hence the purity of Ammonium Thioglycollate by Summit is a dependable and unvarying factor.

Ammonium Thioglycollate by Summit is available only in concentrated form. Summit does not supply ready-to-use solutions, either in bulk or otherwise.

Samples of effective clouding and perfuming agents developed by Summit for cold wave solutions will be gladly sent upon request.

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AMMONIUM THIOGLYCOLLATE

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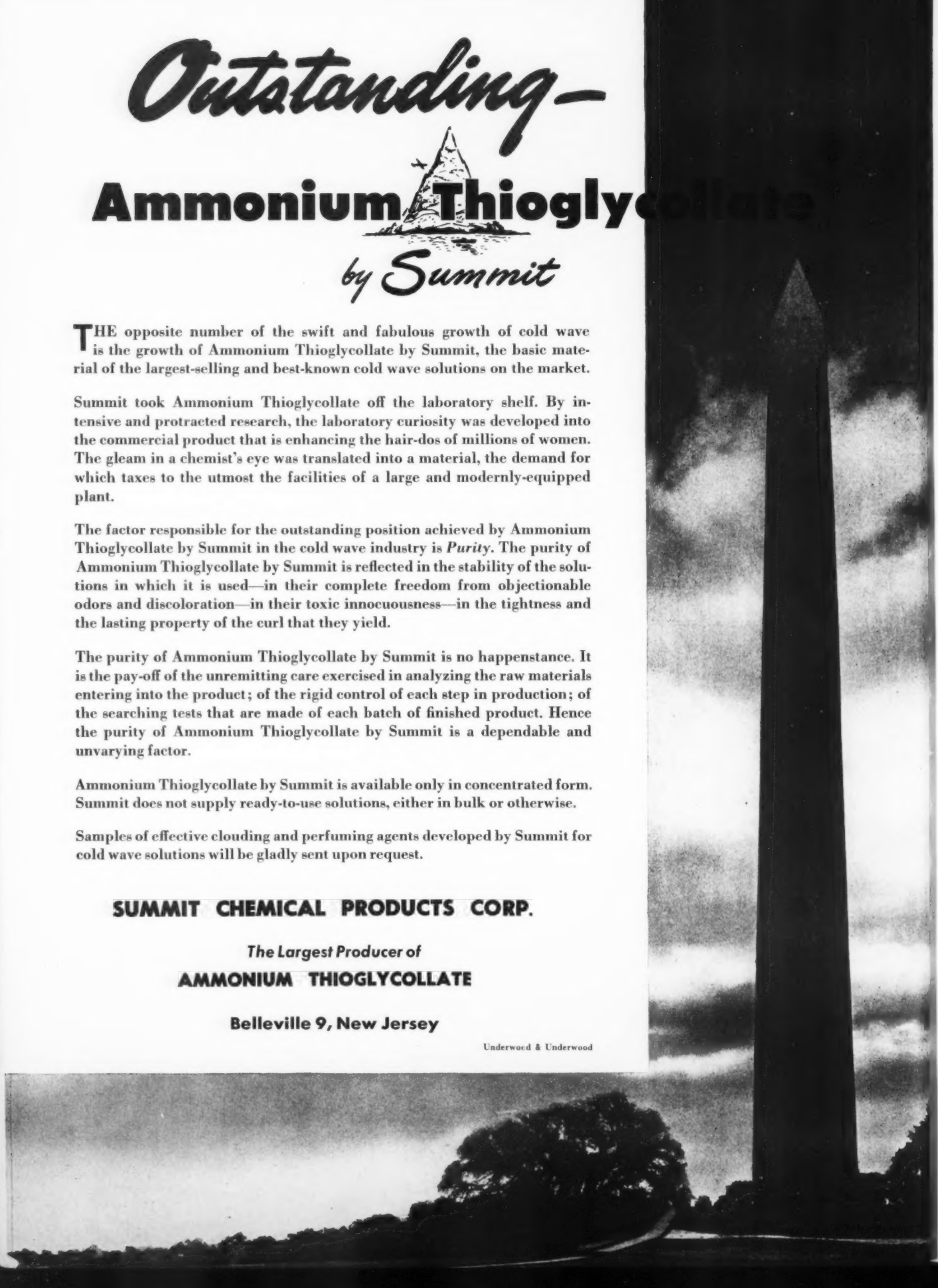

Desiderata

by MAISON G. DENAVARRE

M. G. DeNavarre at work in his laboratory

DEODORANTS

At a recent technical meeting, an alkyl aryl sodium sulfonate was mentioned as having deodorant properties resulting from the destruction of the causative organisms. If this is true, here is another material which may find use in deodorants such as deodorant cologne, deodorant cream and an air deodorant. As for deodorant cologne, the author of the paper under discussion showed that certain fragrances might be weakened when brought in contact with the alkyl aryl sodium sulfonate. Therefore, considerable care must be exercised in selecting the odor. No amounts were mentioned for use in deodorant colognes, but a fair starting point would be about ¼ per cent of the total. The alcoholic strength could probably be reduced considerably.

A certain quaternary compound has similar properties and may find usefulness as a deodorizing agent in the aforementioned preparations.

HAIR GROWING

It was just a month or two ago when this column discussed the subject of growing air on human heads, mentioning that up to now, no one has been able to grow hair under *controlled* conditions excepting that which results from the increased circulation of the scalp that follows a massage with or without a stimulant or irritant. It was mentioned that claims made by hair agriculturalists had been found to be false and that the F.T.C. had taken action against two such people.

In a very recent issue of one of the weekly news magazines, one finds mention of the *Wonderkapper* of Eem, Holland, who is becoming fabulously rich from the purported growing of hair on bald heads. His success is attributed to a secret fluid and it appears that his principal testimonial is a blond farmer who claims to have three inches of gleaming hair on a formerly bald head. It is needless to say that Dutch medical men are skeptical and so am I. I question a great deal whether the barber has anything unusual in his fluid, and that any growth of hair that is resulting from his treatment is the product of the stimulation that follows massage with or without an irritating application. Once the hair follicle and the accompanying germ is dead, there is no hope. The germ may be dormant and the irritating application may cause it to jump to activity, a phenomenon that is also inspired by massage. Until the *Wonderkapper* is able to prove his case clinically using adequate control measures, it is this department's belief that he is one of the many hair agriculturists who come and go with the times.

AMMONIATED DENTIFRICES

Everyone who formerly made a dentifrice of any kind is now about to make an ammonium dentifrice if they have not already done so. The basis for the use of ammonia and urea in such products goes back to some work done a number of years ago in which it appeared that the ammonium ion controlled the lactobacillus to which some tooth decay had been attributed. Experimental work was of a sketchy nature and to date the strongest proof of effectiveness that anyone has is the claim by one manufacturer of such a product, that they have 220 adult private patients of which 50 were controls, showing a substantial improvement following use of the ammoniated dentifrice. However, the use of the dentifrice was not controlled at home and the patients knew that they were using a therapeutic product.

No one will deplore the swing to the ammonium ion dentifrice more than the original proponents who knew that an insufficient number of tests had been made. The American Dental Association's attitude is that there is *some* evidence of the usefulness of these products, but that the prevention of dental caries at this time is not supported by adequate evidence. It appears at this time that the product cannot prevent tooth decay or caries that is already existent.

We all know that the milk of magnesia toothpaste was originally conceived with exactly the same idea in mind.

Since the original workers on the ammoniated dentifrices have not been able to prevent the zealous enthusiasm and since the hands of the manufacturers of dentifrice products have been forced as a result of the invasion of the field by outsiders who have formerly never offered a dentifrice, one wonders why the condition is allowed to remain as it is. The product is a drug and there appears to be adequate authority in

Competition Demands

. . . Trained Performance

Many hurdles must be cleared to develop championship sales volume. If you package a product of semi-fluid form, you'll want the most reliable counsel you can get. This means men who have devoted an unbroken continuity of years to the constant improvement of packaging in collapsible tubes . . . the ideal container for your product.

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the Government that would require the proof for the effectiveness of the ammoniated dentifrices before they are sold to the public.

HORMONE CREAMS

Recommended for reading is an article on "Estrogenic Ointments" by Eller and Eller in the *Arch. Derm. and Syphilol., 59, 449, 1949.* Under carefully controlled conditions 36 people were treated with an estrogenic ointment containing 7500 and 15,000 international units per ounce respectively of a commercial preparation presently sold on the market. In all cases, the subjects were carefully observed, with biopsies taken before and after the treatment. The authors conclude the direct effect on the epidermis of post menopausal women was evident. No effect was apparent in the skins of young women. The effect was proportionate to the concentration of the sex hormone in the ointment tested. Vaginal smears, used to indicate systemic absorption, showed a minimal change in only one of 17 cases. A control ointment free from estrogen produced no histologic change on the skin. This is valuable work and one should see the original for methods of test and control.

QUESTIONS AND ANSWERS

754. OPTICAL BLEACHES

Q: *We are interested in learning what substances are applied in the so-called optical bleaches employed in soaps and also being sold to some extent for laundry and textile use. We refer to the materials which because of their photoluminescence emit a bluing.*

M.F.L.—ALABAMA

A: The so called "optical bleaches" are all coumarins of a type similar to methyl umbelliferone. Several trade named products are available and suppliers' names go by letter.

755. HAIR COLORING

Q: *I shall appreciate your opinion as to whether a finely divided flowers of sulfur or colloidal sulfur would work to better advantage used in an aqueous solution for scalp application—the end purpose of which is restoration of natural color and darkening of gray hair.*

R.B.P.—INDIANA

A: It is generally believed that colloidal sulfur is more effective in skin applications than finely divided flowers of sulfur. However, if the flowers of sulfur are ground finely enough, it is entirely possible for it to be as effective. It is doubtful if sulfur in any form restores the natural color of hair that has become gray. Color can be given to gray hair by using a suspension of 2 per cent sulfur along with 1 per cent of a metal salt, such as lead acetate.

756. NEW FORMULA

Q: *I have intentions of marketing a product on the style of M. Louis's Plastique. Of the many years that I have been a subscriber to your magazine, I do not once recall having you make reference to the product. Have you any knowledge of the product and can you supply me with formulating suggestions along that line?*

S.L.—MAINE

A: We have never seen M. Louis's Plastique. If you would send us a sample jar; we would be glad to examine it and make some suggestions.

757. SYNTHETIC OILS

Q: *Please be kind enough to send us the formula for the following synthetic essential oils; jasmin, fougere, lilac, ideal, chypre, full and rose, by first available return post and suggest us some books for these synthetic essential oils manufacturing, which we need for our hair oil manufacturing.*

H.O.M.—INDO CHINA

A: It is our advice that you do not try to make the perfume fragrance listed in your letter. Instead you should buy from some of the suppliers whose names are sent under separate cover.

758. LIQUID SHAVING CREAM

Q: *We need a formula for liquid brushless shaving cream. We are wondering if you have such a formula, as we would like to have it for our files.*

S.R.K.—RHODE ISLAND

A: Most liquid brushless shaving creams are made along the lines of a hand lotion, but contain somewhat more of an amine soap. Such a lotion can be made from the following formula.

Stearic Acid	20 lbs.
Mineral Oil	25 lbs.
Propylene Glycol or glycerin	25 lbs.
Quince Seed Mucilage 2½%	17.5 lbs.
Triethanolamine	8 lbs.
Alcohol	25 lbs.
Water to make	500 lbs.

Melt the stearic acid in the mineral oil and polyol and heat to 70 deg. C. Add this solution to the water containing the triethanolamine at its boiling point. Stir the mixture with vigor until the dispersion is uniform and then slowly until the temperature reaches 50 deg. C. At this point stir in the quince seed mucilage and then the alcohol to which has been added the perfume. Stirring must then be continued until the lotion has completely cooled if the desired stability and consistency is to be obtained. To make the product more useful for shaving, it is suggested that the amount of soap be increased by 50 per cent, or even more, if the formula can still remain stable.

759. DANDRUFF REMOVER

Q: *I have been working on a non-alcoholic dandruff remover. Can polyethylene oxide condensates be used? If so, are they better than glycerine or propylene glycol?*

V.N.M.—GEORGIA

A: The only way any dandruff remover can work is to mechanically remove any loose scale of dandruff from the scalp, followed by subsequent brushing. Product G-4 and G-11 are both very interesting antiseptics for use in a hair preparation, such as you are interested in. Supplier's name goes under separate cover. Polyethylene oxide condensates are superior to glycerin or propylene glycol in certain cases.

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Sunburn and Suntan

A review of the several factors concerned with the burning and tanning effects of solar radiation, with emphasis upon the physiological and biochemical aspects of the dermal responses involved . . . A discussion of the theory and function of sunburn preventive agents.

DR. EMIL G. KLARMANN*

IT would seem improper to discuss the physiological reactions of sunburn and suntan without reference to the fact that the worship of the sun as practiced in our modern times, really goes back to earliest antiquity, and that indeed its traces are lost in the mists of the prehistoric era. Man recognized early that the light and heat of the sun have therapeutic properties; nevertheless sunlight therapy has had its ups and downs over a period of centuries varying with the march of the diverse civilizations, and with their respective locales. Thus it is only natural that the Greeks and Romans, whose cult of the human body found such superb expression in the numerous masterpieces of immortal sculpture, also built solaria where music and poetry were enjoyed together with the benefits of sunshine; this combination of esthetic and therapeutic values is symbolized in the conception of the sun-god Apollo, who is the exponent of the healing arts and, at the same time, the protector of music and poetry. By contrast, the religious emphasis upon severe modesty characteristic of early Christianity could not help but cause the virtual disappearance of heliotherapy, with its attendant consequences. This situation did not change appreciably until the end of the eighteenth and the beginning of the nineteenth century when Faure began to treat chronic skin ulcers with sunlight, and Chauvin advocated "insolation" for what one would nowadays regard as the neurological symptoms of apathy and fatigue.

The employment of light, both natural and artificial, on a truly scientific basis, in the treatment of different diseases is based particularly upon the work of two men viz. Finsen[1] in Denmark and Rollier[1] in Switzerland; the former treated lupus vulgaris with ultraviolet radiation (obtained from the carbon arc) while the latter specialized in the application of heliotherapy in the treatment of anemia, of rickets as well as of the tuberculosis of the skin, glands and bones. While of no direct interest to the subject of this paper, it may be added, for the sake of completeness, that Roentgen's discovery of the penetrating X-rays in 1895, and the Curies' isolation of radium in 1898 supplied two additional sources of radiant energy which eventually gained a tremendous therapeutic importance.

It should be mentioned at this point, that the literature on the subject of radiant energy and of its various biological and therapeutic aspects is very extensive; full consideration of even a small fraction of it would by far exceed the limits of this contribution.

GENERAL PHYSICAL AND PHYSIOLOGICAL ASPECTS OF SOLAR RADIATION

The light of the sun is but one of the many kinds of radiant energy with which we are familiar today. It is of electro-magnetic character, and differs from other forms of electromagnetic radiant energy in regard to its spectrum, as described in terms of the wave lengths or

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frequencies of its component radiations. The wave lengths are measured usually in millimicrons or in Angstrom units; their relation to one another as well as to other units of length is established by the following equation:

10,000 Angstrom = 1000 millimicron = 1 micron = 0.001 millimeter = 0.0001 centimeter.

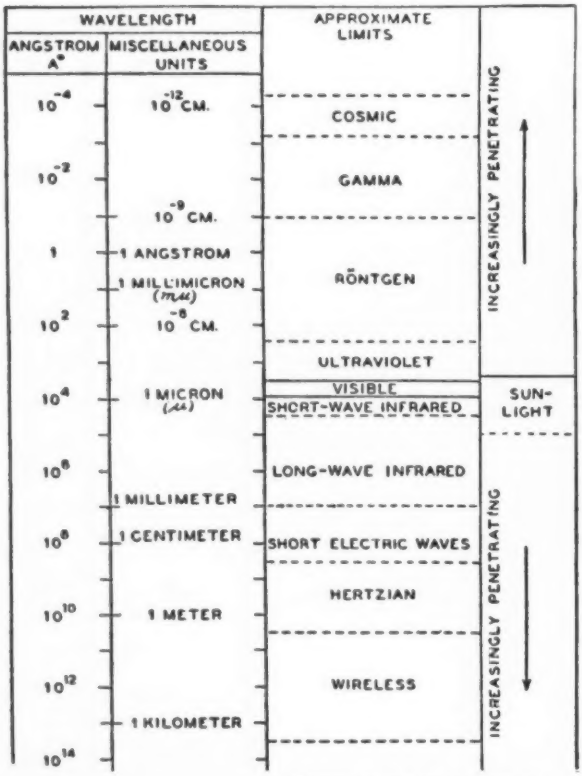
The comparison, in terms of wavelengths of the sun's radiation with certain other forms of radiant energy, is given in the following Table I[2]:

TABLE I

Approximate Wavelengths of Various Radiations (*Lowry*)

	Wavelength Range
Gamma rays from radioactive substances	0-0.1
Roentgen or X-rays	0.01-500
Ultraviolet energy	0-3,900
Extreme or short-wave	0-2,000
Schumann region	1,000-2,000
Middle	2,000-3,000
Limit of solar spectrum	2,900-2,950
Near or long-wave	3,000-3,900
Visible energy	3,900-7,700
Violet	3,900-4,300
Blue	4,300-4,900
Green	4,900-5,500
Yellow	5,500-5,900
Orange	5,900-6,200
Red	6,200-7,700
Infrared energy	7,700-10 $\times 10^6$
Near or short-wave	7,700-14,000
Long-wave	14,000-10 $\times 10^6$

The comparative narrowness of the solar spectrum within the range of all known forms of electromagnetic radiation is illustrated by Luckiesh's diagram[3] in Fig. 1, below:



Courtesy D. Van Nostrand Co., Inc.

Fig. 1. *Total Spectrum of Radiant Energy (Luckiesh)*

which shows also that the visible portion of the sun's radiation constitutes but a fraction of the total radiation, much of which is in the invisible ultraviolet and infrared ranges; in connection with Fig. 1, it should be noted also that the limits of the various spectral ranges overlap in some instances. Approximately 50 per cent of the total solar energy reaching the earth at noon of a clear day in Summer occurs in the invisible spectrum.

As to the penetrating capacity of radiant energy, it should be noted that it is not a direct function of its wave length. In particular, the penetration by radiation of shorter waves than those of the solar spectrum decreases at first until the Roentgen range is reached, whereupon the penetrating capacity increases with decreasing wave length. The situation is similar on the other side of the spectrum. Thus the spectral range of solar energy shows the lowest penetrating capacity, a factor of extraordinary significance with respect to potential radiation damage to all living tissue.

As to the visible spectrum which lies between 3900 and 7700 Angstrom, it might be mentioned in passing that its visibility applies to human beings only, and that it need not necessarily represent the range of visual sensitivity for other animals, for insects, etc. The solar energy utilized by plants (with chlorophyll acting as the catalyst) is drawn entirely from the visible range.

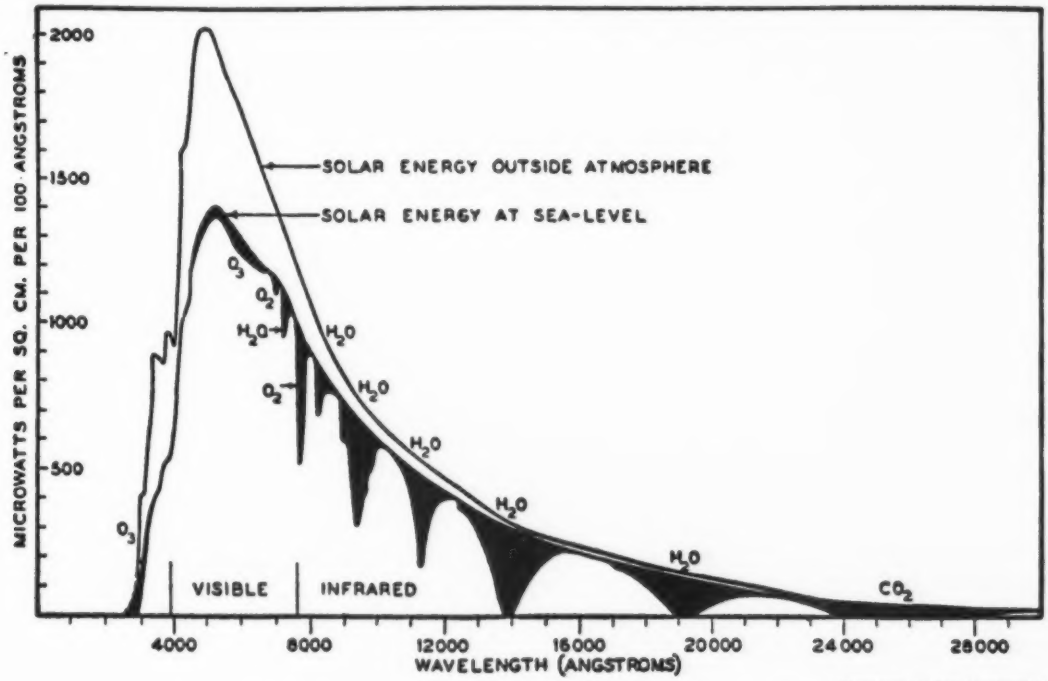
The shortwave infrared within the range of 7000 to 14,000 Angstrom shows deep penetration into body tissue. The biological action of longwave infrared (i.e., longer than 14,000 Angstrom) has not been explored sufficiently.

As to the ultraviolet range, the wave lengths shorter than those around 2000 Angstrom are of little biological or therapeutic importance because such radiant energy is absorbed by most materials, including air. The range between 2000 and 3000 Angstrom, however, is capable of producing certain biological effects (e.g., activation of ergosterol to Vitamin D), although it is of no relevance with respect to solar radiation which barely touches upon this range, its short wave limit being around 2900 Angstrom.

The ultraviolet radiation of the sun within the range of 2900 to 3200 Angstrom is biologically active though the maxima of this activity with respect to certain individual effects may lie outside of this band. Thus the solar ultraviolet energy shows germicidal action, although the maximum of germicidal efficacy is exhibited by the wavelength of around 2600 Angstrom which does not reach the earth. Other biological effects of this range are production of erythema and antirachitic action; with regard to the latter it is noteworthy that, as shown by Gerstenberger[4] and coworkers, the prevention and cure of rachitis may be accomplished by dosages of ultraviolet energy which are so small as to be insufficient to produce a minimum perceptible erythema on untanned skin. The maximum of antirachitic efficiency is shown by the wave length of 2967 Angstrom which is very close to the maximum of erythemogenic action; however, one may infer from Gerstenberger's findings that measures directed toward the prevention of sunburn by reducing the intensity of insolation (e.g., through absorption) are not likely to interfere with the antirachitic action since a sufficiency of ultraviolet energy should still be available for the

latter effect, e.g., following absorption of its major portion by a sunburn preventive.

The following Fig. 2 illustrates the spectral distribution of solar energy reaching the earth's surface on a clear day.



Courtesy D. Van Nostrand Co., Inc.

Fig. 2. *Spectral Distribution of Solar Energy (Moon, Luckiesh)*

The upper curve indicates the effect which would be produced in the absence of any atmosphere while the lower curve shows the reduction of the incident radiation by water vapor in the atmosphere, also by carbon dioxide, ozone and oxygen. Thus the earth's atmosphere appears to act as the first line of defense against that part of solar radiation which otherwise would be fatal to living matter. Especially, the destructive radiation of shorter waves than 2900 Angstrom is absorbed by a

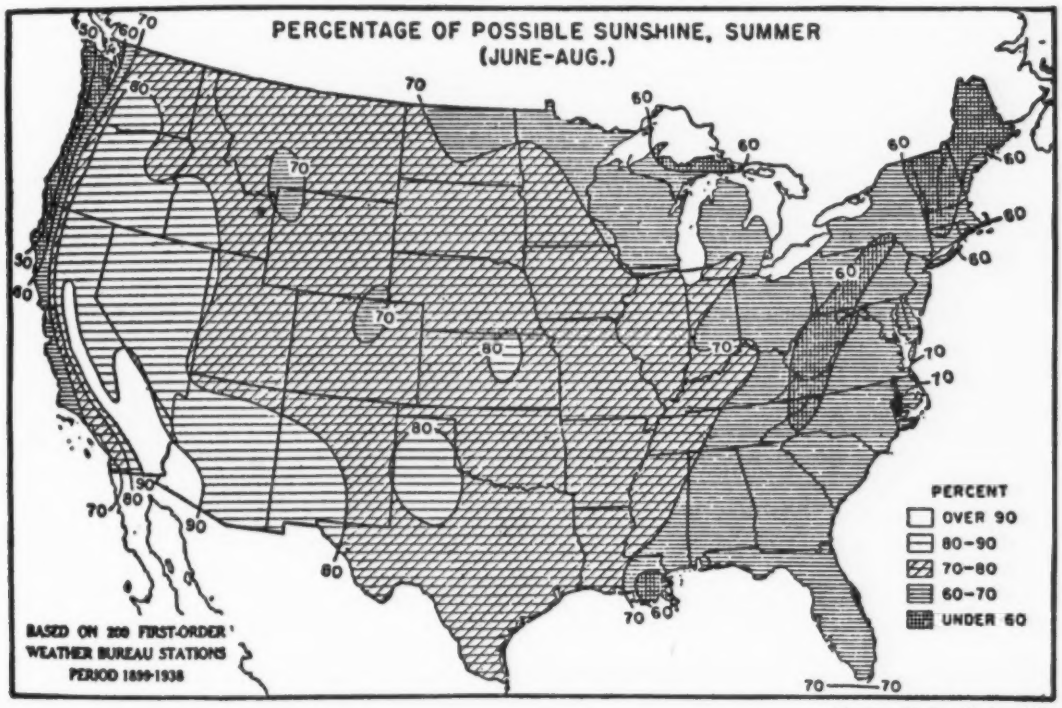


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Fig. 3. *Percentage of Possible Sunshine (Luckiesh)*

blanket of ozone which in turn is produced by the action of ultraviolet energy upon oxygen in the stratosphere. The shortest ultraviolet wavelength reaching the earth is of the order of 2850 Angstrom. Measurements by Dorno[5] and Clark[6] indicate a reduction of the intensity of ultraviolet radiation by about 30 per cent two hours before and two hours after 12 noon.

The preceding Fig. 3 indicates the percentages of possible sunshine during the Summer period, based on an average of almost 40 years. There appear to be only a few areas which show a percentage of 80 per cent or over. Most of the territory bordering upon the Atlantic Ocean experiences cloudiness of such character as to bring this percentage down to 60 or 70, in contrast with most of the Central and Western portions where it is higher, viz. 70 to 80; in the North Eastern area cloudiness reduces this percentage to below 60.

An attempt to compute the total amount of ultraviolet solar energy which reaches the earth during the individual months was made by Forsythe and Christison.[7] While this computation, as shown in Fig. 4 below, is not altogether accurate, it illustrates clearly the very considerable variations in the amounts of this energy (expressed in microwatts per square centimeter) as received by the earth at noon, e.g., during the Winter and Summer months respectively; thus the maximum in Midsummer is 24 microwatts, as against only 0.17 microwatts per square centimeter in Midwinter.

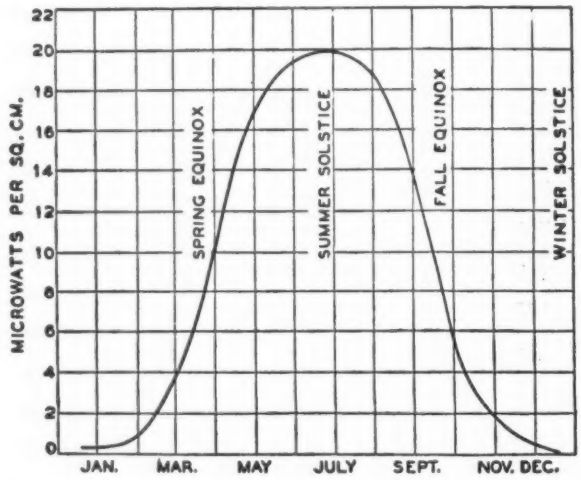
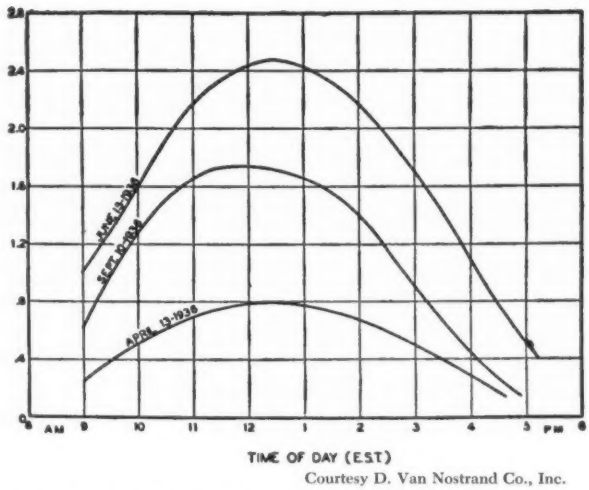


Fig. 4. *Monthly Variations in Ultraviolet Energy Reaching the Earth (Forsythe and Christison)*

Under the optimal conditions for sunburn, only 0.2 percent of the total solar radiation is erythemogenic. The intensity of erythemal radiation depends, first of all, upon the solar altitude, i.e., its variation with the seasons and the daylight hours, as shown by Fig. 5. Unlike in Fig. 4 in which the total ultraviolet light energy is expressed in microwatts per square centimeter, Fig. 5 introduces another unit of measure, viz., the E-viton which is equivalent in erythemal effectiveness to 10 microwatts of energy at the wavelength of 2967 Angstrom; the radiation of this particular wave length is considered to be the most effective in producing erythema.[13] According to Luckiesh and Taylor[8] who adopted this unit of energy, one E-viton acting for 40 minutes on a



Courtesy D. Van Nostrand Co., Inc.

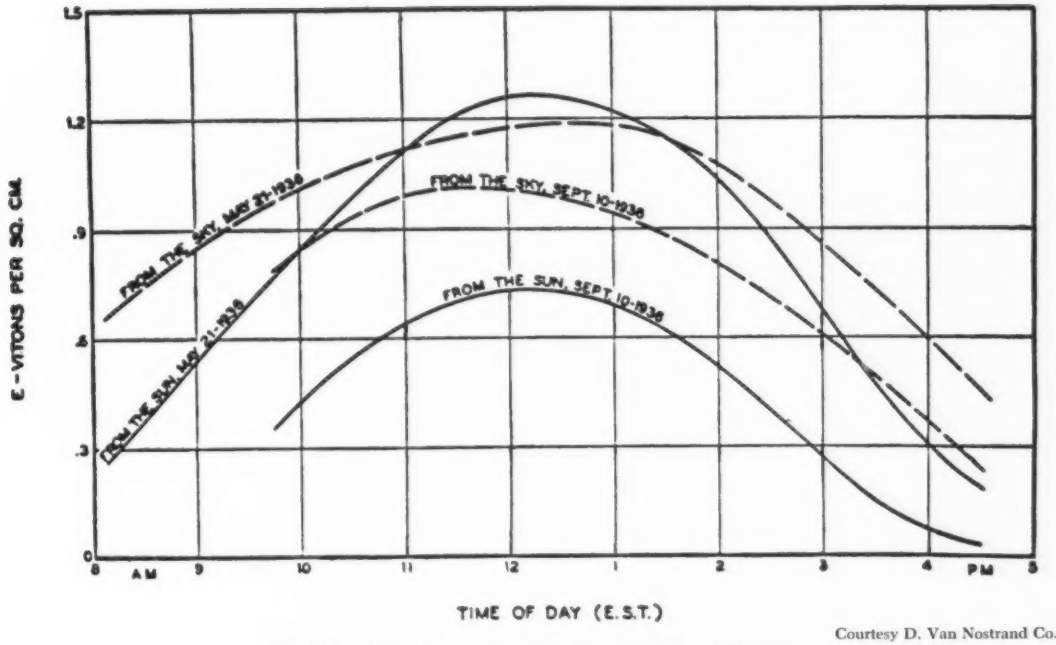
Fig. 5. *Effect of Solar Altitude on Intensity of Erythemal Energy (Luckiesh)*

square centimeter of an average untanned skin will produce a minimum perceptible erythema. It follows that one E-viton acting for 40 minutes will be equivalent in erythemal action to 10 E-vitons acting for 4 minutes, or 40 E-vitons acting for 1 minute, etc. Fig. 5 shows that the greatest erythemal intensity is shown by solar radiation in Summer striking the earth between the hours of 11 A.M. and 2 P.M.

A factor of considerable importance with regard to the subject under consideration is the relationship between direct and scattered radiation. Scattering of light is caused by the gas molecules of the atmosphere. Without scattering of the visible light the sky would appear dark in the daytime, and the stars could be seen. The extent to which scattering occurs depends upon the wavelength. In the case of visible radiation, the shorter wave blue is scattered more than the longer wave yellow or red. The average sky light representing scattered sunlight may contain only 10 to 15 percent of the visible component of solar radiation. By contrast, in the case of the ultraviolet component in the range of 3200 Angstrom or less, the intensities of the direct and the scattered radiations are about equal; on an overcast day, the scattered, indirect radiation may be even more intense than the direct one which explains the frequent occurrence of sunburn on overcast days when least expected by the unwary sun bather.

However, beyond this, it is noteworthy that in late Spring and Summer the intensity of the direct erythemal radiation from the sun exceeds that of the scattered radiation (from the sky) only during two hours in the middle of the day, as shown by Fig. 6, for a day in May; outside of these hours, the scattered sky light shows greater erythemal effectiveness than the sun's direct radiation. The curve for a September day shows that in this case the sky contributes more erythemal radiation than the sun during the whole day. All this furnishes an explanation for the frequent incidence of sunburn acquired by persons shielded against direct sunlight.

Another factor relevant to the effect upon the skin of radiant energy is the reflection by it of light of different wavelengths. As shown by Luckiesh, Taylor and Holladay,[9] considerably more energy in the visible range is re-



Courtesy D. Van Nostrand Co., Inc.

Fig. 6. *Erythemal Energy From the Sun (Direct) and the Sky (Scattered) (Luckiesh)*

flected by the untanned skin, than in the ultraviolet region (Table II). With specific reference to erythemal radiation (viz. in the range of 2800 to 3200 Angstrom) only 4 to 11 percent of incident energy is reflected, i.e., 90 to 95 percent is absorbed. In this connection it may be mentioned that while the skin of a colored person reflects less visible energy, the difference is much less marked in regard to the invisible erythemal energy.

TABLE II

Reflection by Normal Skin of White Persons.
(Luckiesh, Taylor and Hallady)

Wavelength	Percent	Wavelength	Percent
2400	3	4000	28
2600	4	4500	35
2800	4	5000	42
3000	5	5500	48
3200	11	6000	54
3400	16	6500	65
3600	21	7000	68

SOLAR ERYTHEMA AND DERMATITIS

That solar erythema is caused by the sun's ultraviolet light rather than by its heat radiation appears to have been recognized first by the physicists Foucault and Desprez sometime prior to 1858, as related by Charcot.[10] This recognition is based upon the accidental finding that the same type of skin reaction follows upon the exposure to the radiation of carbon arcs. In 1889 Widmark[11] produced the first proof of the erythemogenic action of ultraviolet radiation by demonstrating that this radiation when passed through quartz was active, while when passed through glass it was inactive in eliciting an erythemic response.

Before discussing the effects of erythemal radiation upon the skin and its several constituent layers it may be desirable to refer briefly to its structure with the aid of the schematic drawing in Fig. 7.

The thickness of the epidermis varies from 0.07 to 0.12 millimeters (except on palms and soles), that of the derma from 1 to 2 millimeters. The outer horny layer (*corneum*) shows enormous variations in thickness in the different areas, especially where the skin is subjected to hard usage. The epidermis which contains no blood vessels is nourished by diffusion from the derma consisting substantially of connective tissue which carries the blood vessels.

As to the penetration of the several skin layers by radiation of different wave lengths and the results of such penetration, the situation is as follows:

Radiant energy of 2000 to 2500 Angstrom penetrates only the corneus layer. Radiation of 2500 to 2800 Angstrom penetrates the granular cell layer, that of 2800 to 3200 Angstrom penetrates also the network of blood ves-

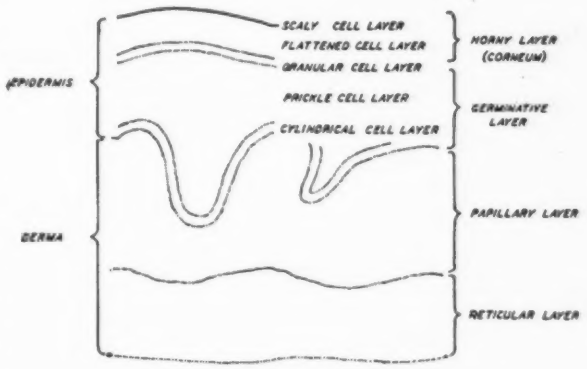


Fig. 7. *Diagram of Skin Section (Giese and Wells)*

sels below (*rete vasculosum*) reaching into the papillary layer; the latter two ranges are both erythemogenic and pigmentogenic in action. The longer waves of 3200 to 3900 Angstrom which also reach into the derma, are pigmentogenic but produce only little erythema, while those of 3900 to 14,000 Angstrom have a heating action which causes hyperemia in the subcutaneous tissue, i.e., an intensified flow of blood through the capillaries; this is entirely different from the erythema which is of a congestive character.

Thus solar erythema is produced mostly in the derma, and especially in the papillary layer, as a result of dilatation of blood vessels in this area. Pigment formation occurs mostly in the cylindrical cell layer. The phenomena of true sunburn which depend upon the damage to or the destruction of cells originate in the prickle cell layer.

Table III correlates the wave lengths of ultraviolet radiation with their relative erythemal effectiveness for the untanned skin. Beginning with the wavelength of 2399 Angstrom which shows the effectiveness of 95, there is first a steady decrease until the wavelength of 2804 Angstrom is reached, followed by an increase to a maximum at 2967 Angstrom. At 3024 Angstrom the erythemal effectiveness is one-half that at 2967; still longer waves

TABLE III

Correlation of Wavelengths of Ultraviolet Radiation With Their Erythemal Effectiveness (*Luckiesh*)

Wavelength	Erythemal Effectiveness	Wavelength	Erythemal Effectiveness
2399	95	2804	6
2482	90	2894	25
2537	80	2925	70
2576	70	2967	100
2654	30	3024	50
2675	20	3132	2
2700	15	3342	0.4
2760	5	3663	0.12

show a steep decrease. For the purpose of this presentation one may disregard the effects of ultraviolet radiation of wave lengths below 2894 Angstrom; the latter, incidentally, shows one-fourth the activity of the maximal erythemal energy at 2967 Angstrom. This situation is illustrated also by Fig. 8, above, right, which, moreover, reflects the remarkable agreement as to the location of the maximum of erythemal effectiveness (of the wave length of 2967 Angstrom) by different independent research teams.[9,12,13] The divergence of the curves at wave lengths shorter than 2800 need not concern one here in view of their virtual absence in solar radiation reaching the earth.

As to the production of erythema, it is a matter of common experience that it does not appear for some time following exposure to the sun of the untanned skin. For descriptive purposes one may distinguish several degrees of skin response following upon varying exposures, which are in a rather definite ratio as shown by the following list:

Degree 1 Minimum perceptible erythema	1.0
Degree 2 Vivid erythema	2.5
Degree 3 Painful burn	5.0
Degree 4 Blistering burn	10.0

Thus it appears that to produce, e.g., a painful burn, one must give five times the exposure required for the minimum perceptible erythema.

Histologically, the sunburn injury is localized largely

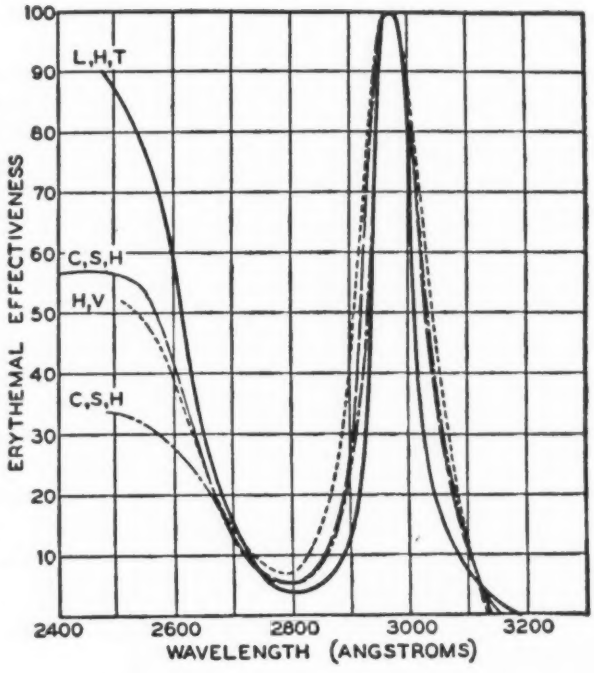


Fig. 8. *Wavelength and Erythemogenic Action as Observed by Independent Research Teams (Coblentz, Stair and Hogue)*

in the prickle cell layer, as mentioned before. In becoming injured, these cells protect the germinative cylindrical cells below. The production of breakdown products accompanying the injury to prickle cells is assumed to result in the diffusion of certain substances which cause a relaxation of the blood vessels of the derma leading to erythema, after a latent period. More extensive damage to the prickle cells is followed by infiltration with lymph culminating in the formation of blisters.

Tanning follows erythema, but the pigment melanin is formed by the melanoblasts first in the basal layer of the epidermis where, of course, it cannot immediately protect the prickle cells which are located above it. Only later, as the pigment granules migrate outward,[14] does the pigmentation begin to exert some protective action against the erythemal radiation.

(To be continued in August issue)

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The Medal of the Order of Commercial Merit of the French Republic

The Republic of France Honors Harland J. Wright

THE Order of Commercial Merit was presented by the French Republic June 7 to Harland J. Wright, vice president of the Moore Publishing Co. and publishers of the AMERICAN PERFUMER, at a luncheon given under the auspices of the Essential Oil Association of the United States in the Advertising Club, New York, N.Y. The decoration makes Mr. Wright a chevalier of the Commercial Order of Merit, an honor held by few American business men. It was pinned on him by Raymond Dreux, Commercial Counselor of the French Embassy, Washington.

R. Dreux pinning medal on H. Wright.

In this manner the French Government evidences its appreciation of significant services rendered by Mr. Wright in facilitating the importation of essential oils, floral oils, and a large range of aromatic products including gums and spices during the trying and difficult war years and the post war period—products of primary importance in the commerce of France, and the French Empire areas.

Mr. Wright has virtually spent his entire business life in the publishing of business publications, except for brief periods during which he served as advertising and sales manager of several concerns in New York and the West.

In 1929 he moved to New York as Vice President and General Manager of the Economist Group and settled in Scarsdale, New York. In 1935 he joined the Robbins Publishing Co., now the Moore Publishing Co., publishers of a group of industrial and business magazines in five important industries:—Gas Age and a group of utility publications in that field; Advertising Agency and Advertising & Selling; Laundry Age; Dry Cleaning Industries; American Printer and American Perfumer and Essential Oil Review

As the publisher of American Perfumer he was

Officers of the Essential Oil Association with Mr. Wright. They are: R. Schloterer, H. P. Wesemann, J. Danco and George McGlynn.

President Wesemann congratulates Mr. Wright in the presence of Maurice Charlois, Raymond Dreux, J. H. Moore and A. Kruckman.

brought closely in contact with the world wide sources of materials originating in almost every country on the globe; such materials as are required where the senses of taste and smell are important and vital to the American economy, not only for perfume, cosmetics and other toiletries, but also in soaps, flavors, foods and pharmaceuticals as well as many other industrial products.

World War II cut off imports by reason of the British blockade and scarcity of shipping space. In 1941, Mr. Wright worked unceasingly in Washington with the State Department and the British Embassy to free valuable quantities of essential oils seized by the British in Bermuda, mostly from France. During the summer of 1941 he succeeded in having these oils released from the British Prize court and made available to American industry. In the years following there were 27 important shipments which had been seized or blockaded in various ports throughout the world which were similarly released and made available to the American economy.

In furtherance of the interests of the importers and dealers in essential oils, Mr. Wright put in several years of intensive work with the War Production Board, Board of Economic Warfare, War Shipping Administration and later the Office of Price Administration. In Mr. Wright's efforts to facilitate imports from France and the French Empire as well as from other far flung sources this cooperative attitude on the part of the British authorities, with Mr. Wright's efforts, were most helpful to the New York agencies of French sources at that time.

In acknowledging the very gracious remarks made by the French Commercial Counsellor in making presentation of the award, Mr. Wright responded as follows:

"I am profoundly moved by the distinction the Republic of France has bestowed with this decoration. Naturally, I feel it is as much a graceful recognition of the close relationship between the essential oil industry of the United States and its counterpart in France as it is a notable honor to the business and industrial press of this nation which I have the privilege of representing as an executive of the Moore Publishing Co. I am especially aware this distinction should be considered as an honor fully shared by Mr. J. Howard Moore, the head of our organization, and by my colleagues on the American Perfumer. It is a far cry from that immortal moment of historic grandeur when the combined prowess of our two nations at Yorktown militarily established the independence of the United States; but nevertheless even a less incident like this is a powerful influence in even more closely cementing the traditionally close relationship of the great republic of Europe and the great Republic of America. We Americans have ever had the inestimable benefit of the kindling inspiration of the rarely rich culture and the political, social, and economic philosophies of our great sister democracy across the Atlantic. I hope, Mr. Commercial Counselor, that you will express to your Government, and to your people, my deep sense of gratitude, not merely my personal thanks, but thanks for the honor France has done our industry."

Mr. Maurice Charlois, French Commercial Attache, New York, accompanied Mr. Dreux. Mr. Charlois has for several years been in close touch with essential oils matters, in the mutual interests of his Government and the industry in this country.

Forecast for Mint is Up

According to the Bureau of Agricultural Economics, peppermint will be harvested from 46,000 acres this year, an increase of 4,000 acres over last year, and 7,000 acres above the 1938–47 average.

A breakdown on peppermint and spearmint follows:

	Acreage		Production Pounds
Peppermint	1948	1949	1948
Indiana	14,300	16,000	500,000
Michigan	10,000	11,000	190,000
Oregon	12,600	14,500	567,000
Washington	4,800	4,400	264,000
	41,700	45,900	1,521,000
Spearmint			
Indiana	13,000	10,400	442,000
Michigan	6,700	6,700	281,000
	19,700	17,100	723,000

Cosmetic Excise Tax Collections

Tax collections for the twelve months ending May 1949 are:

	1949	1948	1947
January	9,648,063	10,371,512	
February	12,984,776	12,290,714	
March	6,796,181	6,927,991	
April	6,913,884	6,927,991	
May	6,983,445	6,660,851	
June		7,283,509	6,535,008
July		7,332,070	7,813,611
August		7,506,518	6,392,678
September		6,890,757	6,733,695
October		6,335,804	7,048,093
November		6,872,541	5,386,690
December		8,079,746	8,545,762

"Tell her it's a miracle cream, within certain limits!"

Reactions of Aromatic Aldehydes

The more important reactions of aromatic aldehydes are here presented and discussed . . . These aromatic compounds are widely used in the pharmaceutical, dye, insecticide, flavor and perfumery industries.

DR. KURT KULKA*

IN Reduction in the Vapor Phase, the aldehyde and hydrogen are passed over a catalyst. Different catalysts, silver, copper and nickel, can be used. Ni-Cu-Al_2O_3-Kieselguhr catalyst supported on copper wire was used by K. Akasi[29] for the reduction of benzaldehyde, p-Me-C_6H_4CHO, O-Me.O.C_6H_4CHO, piperonal, and other aromatic aldehydes, etc., and mainly alcohols resulted.

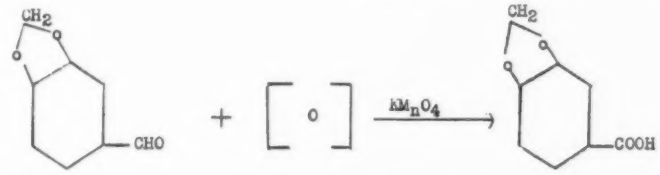
REDUCTION WITH HYDROGEN IN STATU NASCENDI

In the Reduction with Hydrogen in Statu Nascendi procedure, hydrogen is delivered by treating a metal or metal-alloy with an acid or a base and brought in contact with the aldehyde. The reaction is not free from side-reactions, for example the formation of hydro-benzoin (C_6H_5.CHOH.C HOH.C_6H_5) in the case of benzaldehyde.

OXIDATION OF AROMATIC ALDEHYDES

Whereas the oxidation of some aliphatic aldehydes to acids is of importance and employed commercially, that of aromatic aldehydes is of limited interest.

The oxidation of aromatic aldehydes can be accomplished by the usual methods with dichromates, chromic acid solution, permanganates, etc. Piperonylic acid, for example, is prepared in 90-96 per cent yield from piperonal by oxidation with potassium permanganate in the following manner[30]:



60 g. (¼ mol.) piperonal and 1,500 cc. water are heated to 70-80 deg. C. under agitation, until the aldehyde is completely emulsified. To this emulsion is added during 40-45 minutes a solution of 90 g. (0.56 mol.) potassium permanganate in 1,800 cc. water. The agitation is continued at the same temperature for one hour and then the reaction mass made alkaline with 10 per cent KOH solution. The manganese dioxide is filtered off from the hot solution, the aqueous solution is cooled and any unreacted piperonal removed by filtration. The piperonylic acid is liberated from the filtrate by precipitation with a mineral acid.

A novel and interesting conversion procedure of vanillin to vanillic acid was disclosed by Pearl[31]. By caustic fusion of vanillin at 240-250 deg. C., vanillic acid is formed, whereas protocatechuic acid is formed when the reaction temperature is raised above 250 deg. C.

CHLORINATION OF ALDEHYDES

While aliphatic aldehydes react with chlorine to give alpha-chloro aldehydes, acid chlorides are obtained from aromatic aldehyde according to the following equation:

$$Ar\text{-}CHO + Cl_2 \rightarrow Ar\text{-}CO.Cl + HCl.$$

Woehler and Liebig[32] prepared, in this manner, the acid chlorides of benzoic acid.

As a rule, acid halides are obtained today more conveniently from the acids. In those sporadic cases however, where the aromatic aldehyde is more readily available than the acid, the above mentioned method might still be of greater convenience.

The preparation of o-chlorobenzoyl chloride[33] will illustrate the procedure: o-chlorobenzaldehyde is treated at a temperature of 140-160 deg. C. with chlorine, until about 80 per cent of the theoretical weight of chlorine is absorbed. By distillation of the reaciton product in vacuum, the acid halide is recovered in a yield of approximately 82 per cent.

Also to be mentioned is the interaction of phosgene on aldehydes. In the case of benzaldehyde, the reaction

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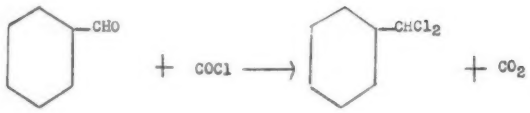
(*Continued from June issue*)

product is benzalchloride, i.e.,:



ALDOL CONDENSATIONS

Aldol condensation takes place when compounds containing a reactive hydrogen atom are combined with carbonyl compounds. They owe their name to "aldol," a product which is prepared by the interaction of 2 mols. of acetaldehyde under the catalytic influence of alkalies. In the course of the reaction addition takes place first, and a hydroxyl compound results, which under the loss of water is capable of forming an unsaturated aldehyde according to:

$$CH_3.CHO + CH_3.CHO \rightarrow \underset{\text{aldol}}{CH_3.CHOH.CH_2OH}$$

$$\text{then loss of water} \rightarrow \underset{\text{crotonaldehyde}}{CH_3CH:CH.CHO}$$

In this particular case, the hydroxyl compound "aldol" can be easily obtained. In most other cases of aldehyde-aldehyde or aldehyde-ketone condensations, however, the respective intermediate compound cannot be isolated and the unsaturated aldehyde or ketone is obtained as the main reaction product.

Aldol condensations are referred to as "polymerisation reactions" because the unsaturated compound can further react either with itself or with a molecule of the other starting material. The progress of these aldol condensations ultimately leads to resin formation.

Aldol condensations are widely applied in organic chemistry and many of the most valuable products used in perfumery are prepared by this type of reaction.

Important aldol type condensations are described below:

(a) *THE CLAISEN-SCHMIDT REACTION*

The Claisen-Schmidt Reaction is an aldol condensation whereby the carbonyl group of a heterocyclic or carbocyclic aldehyde is reacted with a methylene or methyl group adjacent to the carbonyl group of an aldehyde or ketone.

This reaction was applied for the first time by Schmidt[34] in the preparation of furfurylacrolein from furfural and acetaldehyde using a 10 per cent aqueous NaOH solution as a condensing agent.

Claisen and his co-workers investigated this type of reaction and applied different condensing agents, for example barium hydroxide, potassium hydroxide, sodium carbonate and hydrochloric acid.

It was found that benzaldehyde condenses with acetone in the presence of HCl to give dibenzalacetone[35] whereas in the presence of alkaline condensing agents and by adjusting the proportions of the reactants, either one or both of the methyl groups of acetone can be reacted. Thus benzalacetone was prepared[36] by adding 20 parts of a 10 per cent NaOH solution to a well agitated mixture of 20 parts benzaldehyde, 40 parts acetone and 1800 parts water. Dibenzalacetone (cinnamone) resulted from the interaction of an excess of benzaldehyde, namely 10 parts, with 3 parts of acetone in an aqueous alcoholic solution, using NaOH as the condensing promoter. Dibenzalacetone was also obtained by reacting benzalacetone with benzaldehyde in a similar manner.

The preparation of benzalacetone[37] is brought about in the following manner:

$$C_6H_5.CHO + CH_3.CO.CH_3 \rightarrow$$
$$C_6H_5.CH:CH.CO.CH_3 + H_2O$$

Eleven moles of acetone, 4 moles of benzaldehyde and 400 cc. water are well agitated and 100 cc. of a 10 per cent NaOH solution is added slowly, keeping the reaction temperature between 35-31 deg. C. After additional agitation for 2½ hours, the reaction mass is neutralized with HCl and the desired product obtained with a yield of 65-78 per cent.

The large excess of acetone, applied in this reaction, prevents the formation of dibenzalacetone. In a similar way anisylacetone was prepared with a yield of 83 per cent.

At this point the importance of benzalacetone for the preparation of cinnamic acid, obtained by oxidation with calcium or preferable sodium hypochlorite[38] might be mentioned.

Bogert and Davidson[39] condensed benzaldehyde with different alkyl acetones by means of hydrogen chloride. The thus obtained methyl (α-alkyl) styryl ketones were converted into the respective α-alkyl-cinnamic acids by means of sodium hypochlorite.

The preparation of dibenzalacetone:

$$(C_6H_5CHO)_2 + CH_3.CO.CH_3 \rightarrow$$
$$C_6H_5.CH:CH.CO.CH:CH.C_6H_5 + {}_2H_2O$$

is described[40] in the following manner: To 100 g. NaOH dissolved in 100 cc. water and 800 cc. alcohol, a mixture of ½ mol. benzaldehyde and ¼ mol. acetone is added under agitation at a temperature of 20-25 deg. C. After 15 minutes another mixture consisting of ½ mol. benzaldehyde and ¼ mol. acetone is added to the reaction and agitation is continued for ½ hour. The crystalline reaction product results in a yield of 90-94 per cent.

In the course of the procedure, benzalacetone is formed first and the amount of alcohol used as a solvent suffices to keep the product in solution until another molecule of benzaldehyde has reacted. Molecular proportions of the components proved to give the best results as an excess of acetone favors the formation of benzalacetone, while by applying an excess of benzaldehyde partial resin formation results.

In the following, another example of the Claisen-Schmidt Reaction, an interesting technique is described: The preparation of benzalacetophenone (chalcone)[41] which proceeds according to:

$$C_6H_5.CHO + C_6H_5.CO.CH_3 \xrightarrow{\text{NaOH}}$$
$$C_6H_5.CH:CH.CO.C_6H_5 + H_2O$$

5.5 mol. NaOH are dissolved in a mixture of 1.960 cc. water and 1.125 cc. 95 per cent alcohol. Under cooling, 4.3 mol. acetophenone are introduced and agitation is started. 460 g. benzaldehyde are rapidly added and the temperature kept at approximately 25 deg. C. for 3 hours.

The reaction is completed by keeping the reaction mass under ice cooling for 3 hours. The crystalline reaction product is centrifuged and washed with ice cold alcohol. The yield is usually 97 per cent.

For the preparation of α,β-unsaturated ketones, Rainford and Tanzer[42] recommend dissolving equi-molecular proportions of the reactants in warm alcohol. A small amount of a 50 per cent aqueous NaOH solution serves as the catalyst. The reaction mixture is permitted to stand for 1-2 days and after neutralization with a diluted acid, the alcohol is recovered by distillation and the desired ketone purified by distillation or re-crystalization.

Depending on whether an alkaline or an acid catalyst is used, different reaction products can be obtained by the condensation of an aldehyde with an unsymmetrical ketone. Thus α-bensalethylmethylketone results from the reaction of:

$C_6H_5.CHO$ + with $CH_3.CO.CH_2CH_3$ ⟶ $C_6H_5.CH:CH.CO.CH_2CH_3$

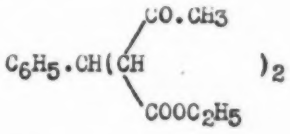
benzaldehyde — methylethyl ketone — under alkaline conditions

whereas α-benzalethylmethylketone: $C_6H_5.CH:C(CH_3)CO.CH_3$ is obtained when the reaction is conducted under the influence of HCl.[43]

The reaction of benzaldehyde with phenylacetone[44] proceeds in a similar manner and two different products are obtained:

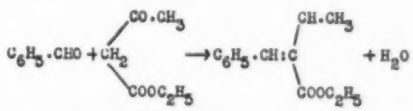
$$C_6H_5.CH_2.CO.CH:CH.C_6H_5$$

by the use of an alkaline catalyst, and



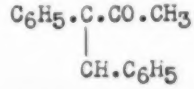
by using HCl as the catalyst.

The use of a primary or secondary base as catalyst in aldol condensations was suggested by Knoevenagel. He applied for example, piperidine in the preparation of benzylidenacetoacetate from benzaldehyde and ethylacetoacetate[45] according to:



whereby to a mixture of 100 g ethylacetoacetate and 82 g. benzaldehyde, cooled to —5 deg. C. a solution of 1 g. piperidine and 2 g. alcohol is slowly added. The reaction mass is permitted to remain for 24 hours at —5 deg. C. and the desired reaction product recovered thereafter with a yield of 95 per cent.

The temperature at which the reaction is permitted to proceed is essential for the nature of the final product, because at room temperature benzaldehyde will react with 2 mols. of ethylacetoacetate to give:



benzylidendiacetoacetate.

Temperature control is therefore necessary for conducting the reaction in either one or the other direction.

Fluersheim[46] investigated the influence of ring substitution in this type of the Knoevenagel reaction, by using p-tolyaldehyde. When a small amount of diethylamine was applied as the catalyst and the reaction was conducted at room temerature, p-methylenebenzylidenacetoacetate was the primary reaction product. The bis-compound was obtained with a yield of 98.6 per cent after the amount of the catalyst was increased to 3 g. for 36 g. p-tolylaldehyde and 78 g. ethylacetoacetate and the reaction temperature raised to 40 deg.

The following lines concern the reaction of the carbonyl group of an aromatic aldehyde with the α-methylene group of another aldehyde. Many of these compounds thus formed are extremely useful in perfume and flavor compositions.

Cinnamaldehyde is the lowest member of these α,β-unsaturated aldehydes and it is formed when a mixture of benzaldehyde and acetaldehyde is saturated with HCl. It is, however, usually synthesized from benzaldehyde and acetaldehyde under alkaline conditions according to:

$$C^6H^5.CHO + CH_3.CHO \xrightarrow{NaOH} C_6H_5.CH:CH.CHO + H_2O$$

when for example 10 parts benzaldehyde, 15 parts acetaldehyde, 900 parts water and 10 parts of a 10 per cent NaOH solution are combined and agitated at 30 deg. C. The reaction proceeds slowly and is completed in 10 days.[47]

Another example is α-methyl cinnamaldehyde, which is formed by the interaction of 100 g. benzaldehyde dissolved in 500 cc. alcohol, 5,000 cc. water and 58 parts propionaldehyde in the presence of 70 g. of a 10 per cent NaOH solution[48] according to:

$$C_6H_5.CHO + CH_3.CH_2.CHO \rightarrow C_6H_5.CH:C(CH_3)CHO + H_2O$$

Today water alone is rarely used as the solvent but is partly or completely replaced by methyl, ethyl or butyl alcohol, for the following reasons: With the higher homologues of propionic aldehyde this reaction fails to take place when water is applied as the solvent, unless the reactivity of the carbonyl group of the aromatic aldehyde is greatly enhanced, for example in nitrobenzaldehyde by the nitro group. By omitting water or using only a small amount in addition to alcohol, the reaction mixture remains homogeneous and the yield of the desired aldehyde is increased considerably.

Applying this method, α-methyl-cinnamaldehyde is obtained with a yield of 86 per cent in the following way:[49] 250 parts benzaldehyde are mixed with a solution of 15 parts KOH in 380 parts dry ethanol and 100 parts propionic aldehyde are added over a period of 5 hours, keeping the reaction temperature at 10 deg. C. After neutralization with acetic acid, the alcohol is removed and the reaction product distilled in vacuum. The way of adding the reactants can be altered, by adding the two aldehydes simultaneously to the alkaline mixture. Thus α-ethylcinnamic aldehyde is obtained in a good yield if a mixture of 235 parts benzaldehyde and 100 parts of n-butylic aldehyde is added gradually to a well agitated solution of 15 parts KOH in 350 parts 95 per cent ethyl alcohol.

An important extension of the Claisen-Schmide reaction was revealed by Kuhn in 1929, namely; that croton-

aldehyde will react with aldehydes; for example with benzaldehyde, in the following manner:

This reaction probably takes place because of the catalytic influence of the double bond of crotonaldehyde. Alcoholic NaOH or piperidine acetate are the catalysts usually employed.

(b) *THE PERKIN AND RELATED REACTIONS*

The preparation of α,β-unsaturated acids from aromatic aldehydes, anhydrides of aliphatic acids and the sodium or potassium salt of the same acid is known as the Perkin reaction.

In the course of this reaction, the α-methylene group of the acidic component reacts with the aldehyde group as is illustrated in the preparation of α-methyl cinnamic acid from benzaldehyde, propionic anhydride and sodium propionate according to:

The mechanism of the Perkin reaction was the scope of intensive investigations. The aldol type of this reaction is postulated by the fact that several of the hydroxylic addition compounds formed from the aldehyde and acidic component can be isolated and that these aldols on heating at higher temperatures pass into the corresponding unsaturated acids.

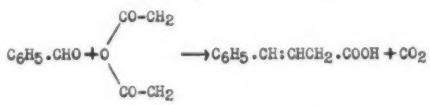
In the modern view of the Perkin reaction which is based to a great extent on the investigations of Kalnin[50] and Mueller,[51] it is generally assumed that the aldehyde reacts with the enolized anhydride. The sodium or potassium salt or a tertiary base such as pyridine, activates the enolization of the anhydride and the splitting off of the acid.

One of the best known examples of the Perkin reaction is the preparation of cinnamic acid from benzaldehyde and acetic anhydride. It may be carried out in the following manner: 0.6 mol. freshly fused potassium acetate or 1 mol. freshly fused sodium acetate, 1.5 mol. acetic anhydride and 1 mol. benzaldehyde are heated to 170-180 deg. C. under efficient agitation for 5-6 hours. Any unreacted benzaldehyde is steam distilled from the reaction mixture which is then neutralized with sodium hydroxide. Resinous impurities are removed by filtration and the cinnamic acid recovered in a yield of 50-60 per cent by precipitation with HCl.

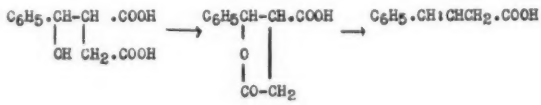
The influence of continuous removal of the acetic acid formed was investigated by Untermohler and Wallace[52] who discovered that when sodium acetate was used as the catalyst the conversion rate, but not the yield of cinnamic acid, was enhanced.

Particularly in those cases where the acid anhydride is not readily available, replacing it with the respective sodium or potassium salt of the acid and acetic anhydride can be considered. Thus the aromatic aldehyde, the salt of the acid and acetic anhydride are heated together. The mechanism of this modification, suggested by Oglialoro, is explained by an exchange reaction taking place between the acidic components, whereby the component having the more reactive methylene group will combine with the carbonyl compound. For example, α-phenyl cinnamic acid (alpha-phenyl-trans-cinnamic acid) was prepared by Oglialoro[53] by heating to 150-160 deg. C. for 8 hours, 16 parts benzaldehyde, 26 parts sodium phenylacetate and 60 parts acetic anhydride. Bakunin conducted a similar reaction at 190-200 deg. in a CO_2 atmosphere and claimed a 95 per cent yield. These high yields could, however, not be confirmed.[54] A procedure described in Organic Reactions[55] uses 0.10 mol. dry potassium phenylacetate, 0.10 mol. benzaldehyde, 0.15 mol. acetic anhydride and as catalysts 5 cc. pyridine and 0.035 mol. potassium carbonate. A yield of 60-65 per cent is obtained.

Perkin prepared phenylisocrotonic acid by reacting benzaldehyde and succinic anhydride in the presence of sodium succinate at 150 deg. C. according to:



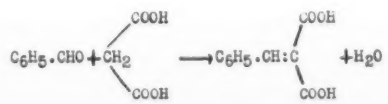
If, however, benzaldehyde is treated at 100 deg. C. with sodium succinate, succinic anhydride or acetic anhydride,[56] the reaction proceeds through the unstable aldol:



Phenylparacrotonic acid is obtained. This acid, on heating to 150 deg. C. loses CO_2 and passes into phenylisocrotonic acid. This extension of the Perkin reaction is interesting from different points of view. It is an example which proves the aldol character of the Perkin reaction.

The yields to be expected in the Perkin reaction depend to a great extent on the character of the aldehyde brought into reaction. Whereas nitro-benzaldehydes and halogen substituted benzaldehydes give yields of 70-80 per cent of the respective cinnamic acids, only poor yields are obtained from other substituted benzaldehydes, for example from o-methyl-benzaldehyde. In these cases, two ways of preparing the desired acid can be considered: 1) Reacting the aldehyde with malonic acid, or 2) The Claisen condensation, whereby an ester of the cinnamic acid is formed.

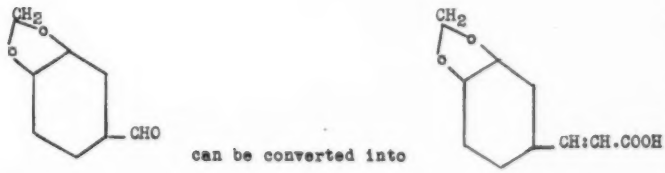
The two carbonyl groups in malonic acid activate the methylene group to such an extent that it will react readily with carbonyl groups. By heating equal parts of benzaldehyde and malonic acid in the presence of ½ part acetic acid at 100 deg. C for 7-8 hours, Claisen and Crismer[57] obtained benzalmalonic acid according to:



This acid yields at higher temperatures cinnamic acid by the loss of CO_2.

Better yields are obtained by the modification suggested by Knoevenagel,[58] who used ammonia or a primary or secondary amine in alcoholic solution. Cinnamic acid in 80-85 per cent yield resulted from the reaction of 1 mol. benzaldehyde with 1 mol. malonic acid and 2 mol. of alcoholic ammonia. p-Methoxycinnamic acid was prepared by Knoevenagel in the following manner: Equimolecular amounts of anisic aldehyde, malonic acid and NH_3 applied as a 8 per cent alcoholic solution are mixed together. The alcohol is removed by a slow distillation and the residue heated on a water bath for 1-2 hours until the CO_2 evolution ceases. The reaction mass is thereafter dissolved in water and the acid precipitated with a mineral acid. The high yield of 91 per cent could not be duplicated by J. R. Johnson,[59] who obtained a yield of 45-50 per cent.

The significant feature of the modification suggested by Doebner[60] is the application of pyridine as solvent. To carry out the reaction, the aromatic aldehyde, malonic acid in an excess of 80-90 per cent and a small amount of piperidine as the catalyst, are dissolved in pyridine and heated on a steam bath until the CO_2 evolution has ceased. The reaction mass is thereafter decomposed by an amount of diluted HCl, sufficient to combine with the pyridine in this way: in a yield of 85-90 per cent.



Piperonal — Piperonylacrylic Acid

Various alkoxybenzaldehydes were reacted in this way and described by Cain and co-workers,[61] and Hayworth, Perkin and Rankin.[62]

Vorsatz[63] discovered that if the aromatic aldehyde contains free OH groups the reaction should be conducted at normal temperature and over a longer period of time in order to avoid side reactions (decarboxylation). By adapting this procedure, ferulic acid (3-methoxy-4-hydroxycinnamic acid) was prepared in a yield of 70-85 per cent from 1 mol. vanillin, 2.2 mol. malonic acid and 0.12 g. piperidine. These components were dissolved in 500 cc. pyridine and permitted to react at room temperature over a period of 3 weeks.

The Doebner modification proved to be a valuable procedure in many of those cases where the Perkin reaction gives only poor yields, for example with alkyl and alkoxyl-benzaldehydes.

(c) *THE CLAISEN CONDENSATION*

In the preparation of α,β-unsaturated acids, which was originated by Claisen,[64] the carbonyl group of an aromatic aldehyde reacts with the α-methyl or methylene group of an ester. The reaction is brought about by bases, particularly metallic sodium or sodium alcoholate. Accordingly, methyl α-methyl cinnamate results from the condensation of methylpropionate with benzaldehyde and sodium, or sodium methoxide:

$$C_6H_5.CHO + CH_3.CH_2.COOCH_3 + Na \longrightarrow C_6H_5.CH{:}C(CH_3).COOCH_3$$

Another typical and many times quoted example of the Claisen condensation is the preparation of ethyl cinnamate, described for example[65] in the following manner:

$$C_6H_5.CHO + CH_3.COOC_2H_5 \xrightarrow{C_2H_5.O.Na} C_6H_5.CH{:}CH.COOC_2H_5 + H_2O$$

29 g. (1.26 atoms) of powdered sodium is added to 460 cc. (4.7 mol.) of pure ethyl acetate, containing 3-4 cc. ethyl alcohol. Under cooling to 0 deg. + 5 deg. C. and constant agitation, 106 g. (1 mol.) pure benzaldehyde is slowly added. When most of the sodium has reacted, 90-95 cc., glacial acetic acid is added and the reaction product is carefully diluted with water. The expected yield is 68-74 per cent.

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(To be continued in August issue)

U.K. Increases Cosmetic Exports

Exports of toilet preparations (excluding perfumed spirits and toilet soap) by the United Kingdom in March 1949 totaled £433,747 as compared with £240,260 in the corresponding month of 1948. Tooth pastes and other dental preparations were valued at £63,952 (March 1948, £49,182), and cosmetics at £189,929 (£79,227). The March 1949 values of these two classes were higher by 35 and 94 per cent, respectively, than in the preceding month. Exports of perfumed spirits in the amount of £76,977 (£45,902 in March 1948) rose 163 per cent over the February figure. Toilet soap exports in March valued at £233,857 (£127,418) increased 65 per cent over the preceding month.

It's Your Line, Make the

What to do about the training of department store representatives and how to increase

"MM-M-M-M-M, what a line!" You've heard it said admiringly about people. And you'd like to think the toiletries trade speaks with the same enthusiasm about your cosmetics, your perfumes, your colognes, wouldn't you?

If they already do, you know it. If they don't, they can begin to just as soon as you give them enough good reasons to, the kind that will attract their admiration and send their enthusiasm skyrocketing, the same reasons that will also skyrocket your sales.

What are some of these reasons? You know them as well as I do! Good quality, at a good price, presented to the public with good, thorough-going promotions, highlighted by "stunts" if you desire it, but first and foremost, completely and utterly thorough.

Last, but of primary importance, are the sales clerks who represent your line in stores throughout the country. They can lose an appalling amount of business for you. Or, they can build up a most enviable volume. Which it will be depends on the training you give them.

For best results, train them to sell service along with the product. All women are positively hungry for beauty and glamor, and they know that cosmetics and toiletries are a means to that end. But the one factor that will make these women prefer your products is good personalized counter service, with the clerk showing the customer "how to" make the toiletries item she's buying do the most for her.

Some sales clerks go to great lengths giving skin analyses, sell a $5.00 jar of cream for some special skin condition, ring up the sale, and that's that. Off goes the customer, clutching a jar of exciting luxury in her hot little hand, she arrives home, and is at a loss to know how to get the best results from this ambrosial extravagance.

She uses it in dallying fashion, without too marked improvement, and when it is finally finished—that's that. Buy a second jar? Perish forbid! She didn't know what she was doing with the first one-half the time. Besides, it cost far more than she usually pays for that sort of thing. Still, if it had actually done any good—oh well, ...

LOST: a repeat customer. And for no other reason than that the sales clerk did not take the time to show her how to derive the actual results she could have gotten from that first jar of cream.

Every woman who comes into the cosmetic department is open to suggestion regarding "how to" make her appearance the loveliest it can be. If line representatives would realize this fully, and utilize it to their advantage, and that of the customer, there would be many more satisfied, repeat customers in the world, and many more thrilled sales clerks, too, with wonderful sales totals at the end of each day and rhapsodic anticipation for tomorrow's business.

Suggestive selling is another good method for building up sales volume. No pressure, please! Just thoughtful, graciously proffered suggestions. When a customer requests a particular item, have the clerk trained to simultaneously bring out other related items in your line

Most of It!

perfume sales through better merchandising.

Paulette French

Paulette French, named for her mother, Pauline, and an aunt, Henrietta, started in cosmetics in a Buffalo department store at the age of eighteen. In her second year, while representing Max Factor, she resigned to be married.

In 1945, she joined William Hengerer Co., again as a Max Factor representative. Nine weeks after returning to work, she found herself appointed the assistant cosmetic buyer. Two years after that she was promoted to Buyer of Toiletries, a position to which she has brought great ingenuity and stimulus.

For outside interests, she devotes her time to six-year old "Debby," who wants to grow up and go into the cosmetic section of a department store.

In the accompanying article, Miss French gives a comprehensive analysis of line presentation, placing special emphasis on the training of department store representatives, and giving some cogent suggestions on the merchandising of fragrance lines.

which she can present for the consideration of and possible purchase by the customer.

So much has been spoken and written about display for so many years that any more seems superfluous. And yet, repetitious as it is, do let me remind you manufacturers that you would benefit materially if you taught your representatives to key your displays to the character of the store in which they're shown, underlining the fact that an uncluttered, dramatic effect can attract more attention and sales than any amount of excess.

As for perfumes and colognes, it has long been a conviction of mine that the more down-to-earth their advertising becomes, the more skyward would go their profits. Perfume advertising is often so fraught with hyperbolic adjectives and frenzied romance that it *un*sells as many people as it convinces. Remove perfumes and colognes from the realm of the grande passion. Make them more of an every day affair, and watch them sell!

There are many daytime fragrances, especially in colognes, that would lend themselves wonderfully to promotions for daily daytime wear. Tell women about them, educate them to the idea that they're a necessity for daily charm, explain to them that one uses cologne differently than perfume, and tell them how—and why. Get them out of the rut of thinking that all they need is a dab of Sinful Socko behind their ears to "knock 'em dead".

At the rate of a dab a date, you're not going to sell much. Remember, it's your line—so make the most of it!

Promotions Keep Sales Moving

Phenomenal products lead to phenomenal sales. . . . Suntans appear to be neglected. . . . Buyers should concentrate on selling and personnel.

CHICAGO

Stores Miss Boat on Sun Tans

RETAILERS of cosmetic lines now realize that it is not more merchandise they need, but an awareness among their own salespeople of how to sell.

The pros and cons of packaging are now having their innings. When July opens with desirable merchandise still in holiday boxes it is a note of warning to manufacturers to eliminate the frills which have characterized boxes and packages of cosmetics.

The indifference of sales people has major executives tearing the scant hair they have left, and this goes for the store, not just the cosmetic department. The latter needs intelligent women to sell. Classes must be re-formed to aid the girls in their refresher courses.

"From now on," said a buyer for one of the great chains, "I'm employing married women who have to work, because in four hours they will make better books than the girls who work eight. These women have to produce if they support their families. Therefore they read, study and keep informed on the various items they sell. The other girls don't have to make the salaries (and don't have the home expenses), and living at home know they will be able to eat and sleep. So I'm out for women who have to work to live. Another point I'd like to make is that the manufacturers need to give their line girls a good big shot in the arm. They have grown fat and lazy. I'd do away with them entirely but the firm seems to feel they add prestige."

The Wieboldt Stores Inc. conduct both training classes and refresher courses for its salespeople. Much of the work is done in the individual stores, for each sectional store has a slightly different buying public. Following these special sessions the girls in the department know they will be shopped sometime during the next few weeks. Outside shoppers do the work and the results have shown doubled sales in some merchandise.

Buyers have ideas on selling but only in the smaller shops are these put into direct operation. The larger stores have to keep repeating the motif to the sales people day by day. Here are some tips which these women think should be on all jars: 1. In warm weather keep all treatments and rouge sticks under refrigeration to retain fragrance and texture. Colognes and friction lotions should be kept cool for real refreshment. 2. If cake make-up is used, sell a good base against which to put it. Even a baby's skin looks dry and harsh when so treated and that dewy freshness is turned to hardness. 3. To sell more colognes, shaker tops should be inserted instead of the present type which always spills too much and the women consider it wasteful. More economy in this type of packaging is guaranteed by this group to produce more sales. 4. When a store has to carry 30-types of deodorants when 10 would do the same job with equal effectiveness the group urges that makers discontinue conflicting sizes, as 39 cents and 50 cents; 50 cents and 75 cents. Yet retain a small jar or bottle for 5 and 10 cent stores. "Firms cut their own sales' volume," said a buyer, "because when they bring out three sizes in liquid and two in jars the sales are spread very thin. Why not a 50 cent and $1 bottle or jar and make it one or the other, not duplication." 5. We find that certain items in a line are good sellers. Why are we compelled to take the entire list of the firm when we may only find our acceptance is on rouge, nail polish or powder? It costs us lost sales.

PLACEMENT DISPLAY IMPORTANT

If you think that display has been overdone, hearken to these figures: One line on a main traffic lane did from $800 to $900 a month during the past several years, then a change in management forced it to the rear of the store, "because it is so well known it will sell any place," insisted the new merchandise manager. It sold, but the drop is approximately $500 down.

"The sale of Father's Day cosmetics," said a sales person, "was so heavy we may as well close up shop until December 1. In Chicago: Lytton's bath detergent created a mild sensation and may eliminate that tide which has been doing the job! Carson Pirie Scott & Co. suggested the smartness of matching fragrances in cologne and deodorant and the new bellows bottle deodorant which has been well featured throughout the area. Mandel Brothers is *the* promotional store and led off with the new

"hair dew," Denney creams for Summertime use and colognes with atomizer. Wieboldt's as well as Mandel's used the Gould home facial as a leader. It is expected to pick up later in the year. The Fair gave presentation and demonstration to the importance of hair treatments and deodorants. Marshall Field & Co. featured "Blue" for brides. Detroit gave unusual space to Father's Day and provoked the comment at the opening of this summary. Crowley's used three-quarters of a page and the drug chains went in for full pages.

Indianapolis is one city that really goes in for cosmetic drama presentation in the use of full color pages that prove the delicacy of modern motif as William H. Block Co. did in offering Tabu in several forms to maintain the same fragrance. When T. A. Chapman Co., Milwaukee introduced White Satin to the city it did a job that may well be copied: The fragrance was sprayed onto the street, bubbles of it floated on the air and as one passed the windows, there was a spray. In Minneapolis, Dayton's featured the combined purse-size perfume vial and lipstick in the same flavor. St. Paul stores found business good on the new curl kits, the home permanents, and colognes with both the Emporium and Golden Rule offering these items and colognes.

Glass Block, Duluth, stressed the smartness of Revlon at the new price. This was an item used as a promotion in many Middle West cities. The St. Louis weather is one reason for the tremendous success in that city of cake make-up for any woman who wants to retain a morning freshness. In suggesting its use, Scruggs Vandervoort Barney stressed the added smartness when a good cream base is used. In the department such presentations are made by demonstration, which produces sales.

WHAT OF SUN TAN LOTIONS

This business of sunning and sun-tan lotions runs into millions but no store seems to think it worth while to go after it with a desire to sell the very people who need it. Sales girls in other years have worn this lotion and saved on stockings. "We don't do that now. Plenty of nylons and at less than a dollar, and they are comfortable, too," said one girl. Contrast this with a trip in three major cities in which not one main aisle had even one bottle of lotion, no tubes or jars of sun-tan cream and nothing to indicate that sun on hair could bleach it to a dozen shades depending upon how the oil was distributed. "The business will come later," said a buyer the latter part of June. But up to that time there had been almost a month of hot, sticky, humid, beach weather that made it impossible to find a "sun" spot at any one of the pools or beaches, for everyone and his wife were sunning.—*Jean Mowat*

BUFFALO

Specials Scramble
Lines Buying

A BEAUTY blitz hit Buffalo the second week of June and had both male and female heads spinning for one utterly beautiful week. The reason? John Robert Powers and seven of his "long-stemmed American beauties" converged on the town to promote the Powers makeup line at the same time that three sets of Toni twins arrived here to launch the new Spin curlers of the Toni Home Permanent Kit.

Consequently, there are now more Toni tops, if not twins, in town than ever before, and thousands of complexions are radiant with the golden glow garnered from Mr. Powers' new Fluid Gold makeup preparations.

Most terrific sensation of the past several months is Helena Rubenstein's Nudit, the new rosy-fragrant cream depilatory that is enjoying phenomenal success in Buffalo.

The suggestion that seemed primary this month came from the clerk at a very popular perfume bar. She claims that the necks of bulk perfume bottles, from which dram bottles are filled, are too small to accommodate a dispenser.

Without soliciting the following information, coincidence just happened to produce two sales clerks in two separate stores who maintain that there are too many reduced-price sales, too frequently, and that these sales last too long. Furthermore, both of these clerks stated that these sales are what have broken up the straight line buying that was the backbone of all cosmetic business for years.—*Maggie Fleming*

CINCINNATI

Do Something
Items Sell Well

EVEN the town's most pessimistic cosmetics department head has no woes these days in Cincinnati.

The majority of stores aren't even stocking much leg makeup, but the John Shillito Co., on hot days, has a strong demand for Shillito Sheer, 17, and Arden's leg film. Rubenstein's Suntan is going very well at Mabley and Carew.

All the national promotions are doing very well. Revlon's matchmaker set (lipstick, nail lacquer, and adheron) at $1 for a $1.85 value is outstanding; Elizabeth Arden Bluegrass, with atomizer, is in counter displays that attract many buyers; Sprite, the new squeeze-bottle deodorant at $1, has a ready market; Rubenstein's liquid and cream deodorants are walking out, and the Coty's giveaway of bathsalts with other bath product purchases is a big success wherever Coty counters stand. The earlier Coty promotion of Muguet de Bois toilet water and perfume is still pulling though the promotion is ended. Tussy's Summer cologne is a hit at Alms and Doepke and the Tussy's deodorant cream half-price sale was its customary boon. Colognes in general are going exceptionally well at McAlpin (where the cosmetics department is squeezed in around escalators) and perfumes, contrary to the general trend, are selling fast as a result of a scented newspaper ad by Mabley on Dana's Emir. Colognes sold, too. Intoxication and Divine continue popular; Faberge, too, and buyers thank national advertising by manufacturers for this.

Home permanents in the lead are Toni and Hudnut, with most cosmetics departments planning to tie in in some way with the planned visit by the Toni Twins. Shillito will feature the sale of twin dolls with washable

hair; Rollman will tie in with the Cincinnati Toni twins later. A soap sale in one store flopped, as soap prices had gone down generally, but succeeded in another store, where additional cakes of soap were added. A promotion is planned of the coffee shampoo, Coffette. Advertising has sustained freak (good) sales of Trill, the wrinkle remover, and Esoterica, the hand cream that removes brown spots.

Father's Day promotions of Courtley, Shulton, and Seaforth were doing nicely.

The sole complaint from buyers is Federal tax. Clerks have their hands full selling, though during a recent slump their commonest remark was: "Something's happened. Women don't want cosmetics the way they used to. If they buy, we really have to sell them. They just buy what they've been buying, unless there's a markdown sale." Though they haven't analyzed it, the clerks seem to feel that the lethargy is due to a lack of sparkle in the general promotion of cosmetics. A product must promise irresistible glamor, or some practical thing like removing wrinkles, making eyelashes grow fast, or curing acne in order to sell. Claims must be extravagant to rate interest and sales.—*Mary Linn White*

ATLANTA

Stores Concentrate on Personnel Training

MOTHER'S Day 1949 will long be remembered with unbounded affection by Atlanta's cosmetic departments, as the occasion largely responsible for pulling their business out of the neat red figures.

Business in general, all around town, tallies about equally with last year, although drug stores are reporting a slight increase, due in part, as one manager mentioned, to the transportation strike which reduced most of the surburban housewives to shopping within walking distance of their homes.

Cosmetic departments look upon May and June as rather lush selling seasons down here, because Mother's Day, graduations, Father's Day, weddings and the beginning of the vacation season always bring on a fresh spurt of giving.

They can also be sure that June, July and August will bring forth big increases in sales of colognes, and are confidently expecting the addition of deodorants to some of the established cologne lines will aid in stimulating sales even more this year.

Sunbathing is already showing signs of being a popular pastime here this Summer. Sun garnering products are moving out at a rapid rate, led by oils and ointments. The gimmicks here, according to one department head, have been some of the various new novelty items, such as a suntan lotion with a special applicator, which the stores are using as 'teasers' to bring customers into the departments.

Old Spice seems to be the most popular down here, followed closely by Yardley, with Sportsman and Courtley bringing up the rear.

It has also been observed that more and more men are buying deodorants, which will probably swell the sales.

All of the stores are resorting to various tricks for getting customers into the stores and are also concentrating at long last, in teaching their personnel the almost lost art of selling.

Two items that have had immediate acceptance on the Atlanta market, both of which were preceded by stories in local newspapers, are the new beer shampoo and a wrinkle removing product, called Trill, the latter having been reordered as many as two or three times in each outlet since it was introduced about three weeks ago.

Men's cosmetics, in the still conservative South, are showing signs of having one of their best seasons to date.

To go along with all the suntan lotions, ointments and creams now being sold, Helena Rubinstein's waterproof mascara is a popular seller, outdistancing all other eye makeup products at the moment—*Maynita Gerry*

LOS ANGELES

Los Angeles
Open Demonstration

MAY and June saw Los Angeles department stores shooting for volume. The Broadway Stores ran their 53rd Anniversary sale, May Co. ran its 26th Anniversary sale, and Bullock's and Robinson's played up their month end sales in a series of full page newspaper advertisements. The result was that everybody did a good business. J. J. Otto, buyer at the May Co., said that in his 24 years' experience with the store, this was the first sale which "held up,"—that is, the tenth, or closing day, in point of sales equalled the first, second or 3rd day. Consensus among buyers of these stores was that so long as you could offer $1.00 worth of merchandise for 50 cents people had plenty of money and would part with it. If you sat back and waited for regular business you would be left holding the sack. How long will that condition last? It's anybody's guess. Los Angeles is a big town, and it's growing fast.

DISPLAYS

In addition to Ayer's new home wave, Bullock's were displaying last month portable electric hair dryers, electric vibrators for massage and infra red rays, as well as all the other leading home wave sets. The accent is still on hair at Bullock's. The Broadway and the May Co. went Summery, with sun tan lotions and hot weather colognes (most of them at half price) taking the lead in displays. The May Co., in addition, is playing up a solid section of boxed and packaged soaps. When the California thermometer starts dancing at 85 degrees such displays bring action.

The open demonstration is back at the May Co. in full force.

PUT AND TAKE

The Harriet Hubbard Ayer fashion promotion dominated Los Angeles toiletries circles last month. Two chartered planes unloaded nine models, sales people, hair fashion stylists, and furnishings and equipment for same at the airfield, and Bullock's downtown promptly made room for them in the cosmetic section and in the audito-

rium. One whole side of Bullock's toiletries section was canopied off, with the name of the promotion in streaming letters across it, and a raised booth was erected in the Broadway aisle on which the hairstylist did his stuff. An impressive promotion, truly. But not for the little guys in this business.

SALES GIRLS' COMMENTS

"In sending out selling information on their products to their demonstrators," a smart buyer told us the other day, "manufacturers might give more thought to the danger of impressing a salesgirl with the belief that she is *his* employee, and not that of the store."

Of course, that is the store angle, but it is the manufacturer's, too.

A salesgirl in the soap section was down on her knees laboriously hauling boxes of soap off the shelves under the counter when we peered over the display to see where she was.

"Oh, it's you," she said, flipping her hair out of her eyes. "I wish you'd tell some of these soap manufacturers to label the fragrance of a box of soap on the end of the box instead of on the bottom."—*Don Cowling*

PITTSBURG

Swing Away From Leg Make-Up

TRENDS in cosmetics as used by customers constantly undergo a change. Sometimes the change is evident a season or more in advance. In this city, the swing away from leg make-up is marked.

Another trend that has made itself felt, particularly in the bid for Father's Day gift-giving, is lack of interest in men's toiletries. Competition in other lines of men's gifts is credited with the slump by some sales people. General lack of interest in cosmetics is given as another reason, plus the burden of sales tax.

In direct contrast to the downward trends noted, a smart buyer indicates he whiffs an upward trend that could become important. It concerns soap. The premise upon which his reasoning is based sounds logical.

Pointing out that detergents have been so enthusiastically accepted by housewives, the question is raised "Why can't cosmetic detergents be equally as popular?"

In the line of recently introduced cosmetic soaps we note Dial deodorant bath soap has not had exciting results in this specific area. Maybe people here are cautious about accepting anything new. It has good distribution. It has been reasonably well advertised. The general impression gathered from conversations here and there is that the price is a trifle high for mass acceptance.

Comment from customers on Summer half-price sales, as reported from girls-behind-the-counter gives some interesting sidelights on this somewhat recent practice:

"If it sells for that price now, we were paying too much for a single bottle before."

"What's wrong with it? Is it the same as before?"

"Why stock up? There's plenty to be had now."

Along the suntan and sun-protection line, several salesgirls have wondered why as much attention is not given to sun protection of the hair through cosmetics. General interest in hair products would indicate this ought to be a "natural," provided, of course, such products actually do protect hair from fading, streaking and drying.

Colognes, toilet waters, deodorants, suntan lotions—all summer items, have been having a steady, but not a bouncing sale. On the subject of suntan protectives, the public has been educated to their use through editorial comment, as well as advertising, so salesgirls report there are few instances when a customer has to be sold on their general value. —*Jean Shaffer*

DALLAS

Customers Interested in Summer Preparations

DALLAS newspapers have been loaded with cosmetic and perfume advertising during the past month with graduation, June brides and Father's Day for tie-ins. Then, too, there was the approaching Summer season which in Texas requires special care of skin and hair.

An article in the local paper debunking the idea that sunshine and resulting tans were healthy brought a flood of inquiries into some stores about protective lotions. One store did a quick survey and held a special meeting of clerks about this and were able to answer questions and up sales.

Summer colognes and soap sales in most stores are showing greater strength this year over last year.

The chains have used counter displays for Summer hair protectors—shampoos, oil treatments, brushes, lotions. They have recommended short hair cuts and home permanents to cope with many swimming sessions. Minit Curl has been advertised extensively and successfully by one drug company. Toni and Richard Hudnut home permanents are keeping pace. Clerks report that customers are more apt to ask questions about special Summer preparations, and find they must keep well informed. Most of them use manufacturers' information folders for such material. Some find it useful to keep them handy under the counter for reference.

Men's colognes and toiletries were going well in Father's Day activities. Charbert's "Of Thee I Sing"; Dunhill's after shave and cologne; Seaforth's lotion, talcum and cologne; Yardley's after shave, talcum and cologne.

Sanger Brothers department store reports splendid results from Tussy Deodorant promotion. Dorothy Gray Summer cologne has continued a fast pace set last month. Dermatetics holds a good lead in protective lotion demand.

Scented blotter enclosures on D'Orsay's "Intoxication" and Francis Denny's Deodorant cologne pulled extremely well for A. Harris and Company, as did special advertising on Tussy Deodorant. Harris' also reports increased demand for solid colognes, particularly Lucien Lelong.

Neiman-Marcus used newspaper advertising to introduce Elizabeth Arden's sun-proof lipsticks with good re- Grass Flower Mist with gift atomizer was so great, the store made a repeat offer the next week to fill requests.

—*Jean Shaffer*

Packaging Portfolio

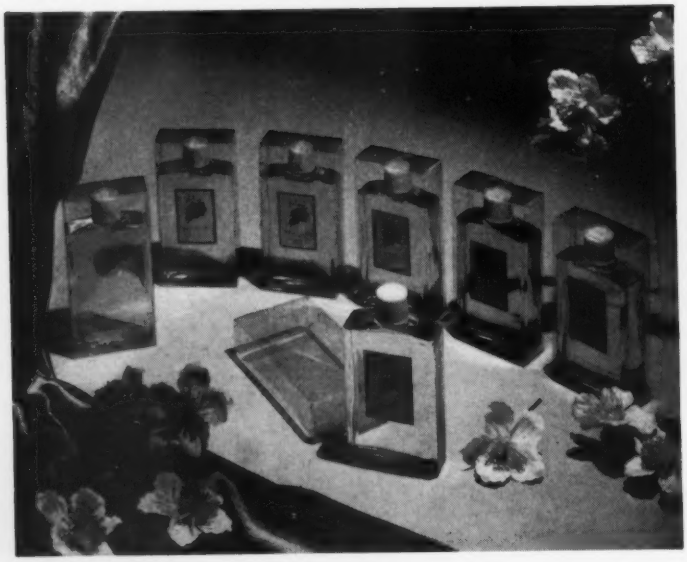
SHULTON

SHULTON: A new Desert Flower toiletry set has been introduced by Shulton. The grey and white, gilt paper lined lid-box, decorated with a yucca motif, holds dusting powder with wool puff and toilet water. Retails for $2.50.

SOLON PALMER: Toilet water in a new 2-ounce size has been presented by Solon Palmer. Available in Rose Leaves, Gardenglo, Lilac Sweets, Lily of the Valley, Violet Leaves, Wisteria and Apple Blossom, packages are in transparent cartons for sales appeal. Price $1.20.

CHEN YU: Richard Hudnut has restyled its Chen Yu bottle with a broader base for stability, two finger-rest spaces on the bottle, and a finger-guide brush to simplify the application of polish. The new red, gold and antique white package has a dragon motif and gold lettering. Sells at 60 cents.

SOLON PALMER



CHEN YU

JEAN PATOU

JEAN PATOU: Poudre Joy, an imported-from-France face powder is offered by Jean Patou. The package is circular, of rich ebony, with the Jean Patou insignia engraved in gold. A crown-like effect is achieved in the plastic container by a ridged side which combines cream and gold. Retail price $6.00.

PARFUMS CARDINAL: A smart red, gold and black label, created by Richard M. Krause, and dramatically severe in design, is the highlight of the packaging for Parfums Cardinal. The bottom of the bottles are flared to prevent tipping. Tops are in black.

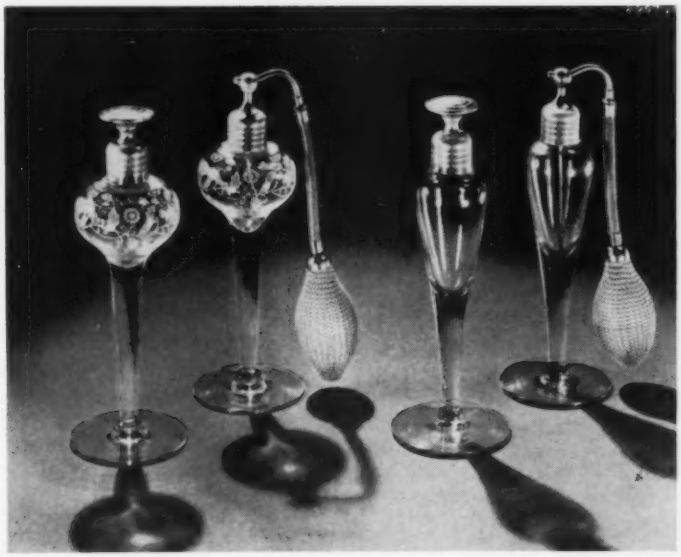
PARFUMS CARDINAL

VOLUPTE: Volupte has introduced its new champaign glass Perfumizers and Perfume Applicators. Both are made of hand-blown glass, with gold metal trim, and come in matching sets. Colors are Golden Champaigne, Champaigne Green, Champaigne Blue, Champaigne Orchid and Sparkling White Champaigne. Prices are $4.00 to $10.00.

HOUBIGANT: Houbigant's Chantilly Liquid Skin Sachet, a new type of fragrance medium is ready for national distribution. Packaging fits harmoniously into the company line. Price $1.75.

HOUBIGANT

VOLUPTE



FLAVORS

Candy Flavorings

The adequate flavoring of candy and confectionery requires an intimate knowledge of flavor techniques and types.

MORRIS B. JACOBS, PH.D.*

THERE are various ways of grouping the flavors that are used for candy. In the simplest classification we can consider all flavors in two categories, namely, those used for soft candies and those used for hard candies.

In general, lesser amounts of flavor are necessary for soft candies since the flavor is introduced at temperatures at which loss by evaporation is not of too great importance.

For hard candies, since they are processed at high temperature, the flavor must have much more heat resistance and therefore have greater fixative qualities. Here too, the flavor should be introduced as near the end of the processing as possible and at the lowest convenient temperature.

In a more elaborate classification the flavors used for confectionery may be grouped according to the major groupings of candy itself, that is, as hard candy, sugar creams (fondants), sugar lozenges, fudge, caramels including toffee, marshmallow including whips, nougat, gums and jellies, bonbons (coconut and plain), coated candies (chocolate covered and otherwise). There are commercial firms that produce flavors which are specially designed for each of these classifications.

Possibly a more convenient grouping is to divide confectionery into three major groups, that of (1) hard candies, (2) creams (fondants) and marshmallow, and (3) starch jellies and gum goods.

* Professor of Chemical Engineering, Polytechnic Institute of Brooklyn.

HARD CANDIES

As mentioned previously, in order for flavors to be suitable for use in hard candies such as fruit drops, lollipops and the like, it is necessary that the flavor be composed of higher boiling components, for these will have less tendency to evaporate at the processing temperature. It is also necessary for the flavor to be concentrated, for hard candies cannot be diluted. The concentration of the flavor is adjusted so that from 0.5 to 1 ounce of flavor per 10 pounds of candy batch is recommended with 2 ounces a maximum.

Many of such flavors are oil soluble and contain no water or alcohol. Often natural essential oils can be used for such purposes thus it is common to use natural and imitation spice and citrus oils for hard candies at a concentration of about 1 ounce per 100 pounds of product.

CREAMS AND FONDANTS

In the processing of creams and fondants a principal factor is the adjustment of the sugar grain to a small size and the incorporation of air. The latter decreases the

density. It is preferable to add the flavor after the density desired has been obtained. For fondants and creams and confectionery which are chocolate covered it is best to use powerful flavors in order that the flavor should be apparent even with the chocolate coating. Fidelity of flavor is also important. These results may best be obtained with the category of flavors we have termed fortified natural flavors.

STARCH, JELLIES AND GUM GOODS

A third major category is that of starch jellies and gum goods. Soluble flavors similar to those used for hard candies, but not in oil solutions, are recommended for incorporation into starch jellies. Many different flavors are used but the principal group consists of those belonging to the citrus flavors like lemon and orange. In the case of gums, after the sugar, commercial glucose or starch, and gum are cooked and the batch is ready to be cast, the flavor is added.

SPECIAL FLAVOR ITEMS

While the above directions cover the flavoring of the major candy groups and it would be impossible to detail full directions for the flavoring of every candy since that would entail actual descriptions of candy manufacture which is beyond the scope of this article, it is appropriate to detail a few items.

In the flavoring of licorice gum drops, pastilles, or jujubes, the gum arabic is dissolved in water and separated from any insoluble matter by filtration or other method. This is mixed with sugar and boiled to the proper temperature. The flavor is then added and incorporated with the least possible stirring to prevent the formation of bubbles or of opaque spots. The customary flavors used are anise, mint, and root beer at a concentration of about 4 to 6 ounces per 100 pounds. Too much flavor gives a bitter product and therefore should be avoided.

Fudge may be considered as a fondant in which materials such as milk and other dairy products, nuts and fruits have been incorporated. After the batches have been cooked to about 244-245 deg. F., they are placed in a cold mixer, cooled to 220 deg. F. and then mixed, and finally flavored.

In flavoring fondants, the factors stressed above should be considered. The fondant may be warmed slightly so that it is relatively free running and then the concentrated flavor, either concentrated fruit juice or fortified natural flavor is added drop by drop. The batch should be worked after each addition. Since transparency is not a factor in the processing of fondants natural flavoring oils like lemon, orange, lime, and tangerine may be used.

In bonbons and in other candies where fats and oils are used in making the candy itself, oil soluble flavors can also be employed.

Nougat may be considered as a caramel which has been cooked in two separate batches and then mixed. After they have been mixed, one batch having had milk and other dairy products added, beating is continued until the proper volume is obtained. Then a fat is added and fruits, nuts and color. Flavor is also added at this point but in mixing in the flavor the least possible stirring should be used in order to avoid a diminution in volume. The finished nougat can be poured on to the cooling slab and allowed to set. In older methods vanillin was generally added after the heat was turned off.

Lozenges consist of finely ground or powdered sugar which is mixed with a thick mucilage formed by dissolving or suspending gum arabic in water. The flavoring material is added and the entire mass is mixed again thoroughly to form a stiff dough. It is rolled into sheets and then stamped out. Lozenges are prepared in various flavors, peppermint being one of those most commonly used. Other flavors are those resembling perfumes, resins and fruits.

TECHNIQUE

Several aspects of the technique of flavoring confectionery and candy have been touched upon in the preceding sections and additional points may be added here.

Since candies consist of a number of components which may not be soluble in each other, for instance, water, cocoa butter and other fats, cocoa solids, they will form with sugar and other materials several solid phases or a solid and a liquid phase. These may not be identical in various batches and thus complicate the flavoring problem. Hence it is often necessary and, indeed advisable, to make trial lots of candy prepared on a laboratory scale in order to enable one to know definitely how much of a flavor to add. Small experimental batches should be cooked and worked under conditions simulating those of the product batch.

It is important to know the volume of a flavor added to any given batch. This can easily be ascertained by actual measurement. It is true that experienced candy makers can tell the proper amount of flavor to add by taste but it does no harm to know the volume added accurately and thus be more certain of being able to duplicate results. To know these volumes it is best to use calibrated glassware like graduated cylinders and pipettes. (There is nothing mysterious about these tools of the chemist and anyone can learn to use them.) Control of the volume of addition will avoid the pitfall of adding too much. Even when adding drops, it is important to count the drops and thus know the volume added.

Another point in good technique is noting the temperature of the batch at the time of addition. This takes only a moment of time and will save many failures for then the addition of the flavor can be performed repeatedly at the same temperature.

When starting a new batch of flavor or in changing to other brands, it is good practice to run trial batches in order to obtain the equivalence of one flavoring in terms of the other. Then all the records kept for the first flavor can be used as a guide for the second flavor by use of a simple factor. This is particularly true with natural flavors.

PRECAUTIONS

Thermal Hazards.—The high temperature at which certain candies are processed subjects flavors to at least four effects, all of which are detrimental to the flavor. First and foremost, there is loss of flavor ingredients because of volatilization at the high temperature; second, some of the ingredients may be readily oxidized at the high temperature; third, other chemical reactions harmful to the flavor may take place such as the reduction of some components by the reducing sugars, like glucose,

that are present, and fourth, when oils containing terpenes are used as flavors the terpenes may polymerize and form resins that have undesirable flavors. It has been stressed before in this paper and can be stressed again that great care must be exercized in adding flavors so that in spite of the necessity of adding them at high temperature they are exposed to a minimum of high heat. This is achieved by adding them at the lowest possible temperature and at the end of the heating step.

Uniformity.—It is essential that the flavor be mixed thoroughly with the batch. If this is not done parts of the batch may not have any flavor and other parts may have too much. With some types of candy, namely those which have been aerated or those which have to be transparent the amount of mixing must be kept to a minimum. In the latter case flavors containing alcohol may be used so that the flavor spreads rapidly throughout the batch with a minimum of mixing.

Amount To Use.—It is a common fallacy that if a little is good a lot is better. This is certainly incorrect in the flavoring of candy and confectionery. In most instances too much flavor spoils the effect we want to achieve and may, particularly when synthetic aromas are being used, give the product an artificial character wholly at variance with what we want. The result may even be disagreeable in taste.

It is necessary in the case of those candy products which are heated especially high or which are subjected to a long drying step to add somewhat more flavor so as to account for that which is lost as a result of evaporation but at all times the minimum amount should be used to obtain the result desired. Chocolate coated candy also requires more or stronger flavors so that the chocolate flavor does not wholly submerge the flavor we want to stress.

Type to be Used.—As described above there are different types of flavors: extracts, essences, emulsions and the like. Each has its use but it is better to use oil solutions of flavors in hard candies, bon bons and the like while soluble extracts and essences can be used to advantage in jellies and other candies where a clear product is desired.

Alcohol.—Flavors made with alcohol are useful particularly for beverage purposes but it is to be noted that alcohol is very volatile and in evaporating often carries off flavoring components. This is a disadvantage in using alcoholic flavoring essences for some confectionery purposes.

On the other hand alcohol acts as a penetrant probably by lowering the surface tension. This action assists in spreading the flavor quickly throughout the candy mass and thus an evenly or uniformly flavored batch is obtained with a minimum amount of working or kneading.

Dilution.—One final precaution to observe is to avoid dilution of the candy batch by the addition of large volumes of a weak flavor. It is in such instances as in the manufacture of hard candy that concentrated flavors and flavor pastes will be found useful.

Flavored Notes

Flavors in an oil vehicle have an established position in candy manufacture but it is preferable to use an aqueous medium when flavoring jellies and the like.

* * *

In the obits concerning William H. Luden, reference was made to the use he made of menthol in flavoring cough drops.

* * *

On occasion, this column has been requested to give information concerning the principal flavor formulary books. A fairly complete listing of formulary books is given on page 289 of Synthetic Food Adjuncts.

* * *

For candy which is boiled to hard and extra hard crack, that is to temperatures ranging from 290 to 330 deg. F. flavors containing high boiling components should be used and these should be fortified with components having high thermal resistance.—*M.B.J.*

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SOAPS

Two Divisions Established within AOASGP

The directors of the Association of American Soap & Glycerine Producers, Inc., meeting recently in Chicago, established two divisions within the Association. A Specialty Soap Division will operate to provide a common meeting ground for manufacturers of liquid, paste, and jellied soaps, and bar, chip, flakes, granulated or powdered soap specialties, where activities to promote these special interests may be undertaken. An Industrial Soap Division will serve in the same manner for the manufacturers of bar, chip, flake, granulated or powdered soaps sold in bulk.

A Steering Committee has been appointed for each Division. It is contemplated that Divisions may appoint other committees such as Technical or Research, Statistical, Trade Relations, Convention Program, Membership, Nominating Committees, etc.

Fat and Oil Situation in France

The French fat and oil situation improved markedly in 1948 and is expected to improve still more in 1949, given reasonably favorable weather conditions. Increased imports have contributed to the more favorable supply position, as had a larger production of domestic vegetable oilseeds, but the major factor was the increased production of animal fats. The rationing of soap has recently been eliminated.

Imports of vegetable oils in 1948 continued the upward trend that has characterized each postwar year. Total imports amounted to 354,000 metric tons in terms of oil as compared with 307,000 tons in 1947 and 161,000 tons in 1940. The proportion of imports in the form of seeds rather than processed oils was also higher. Imports of oil bearing material amounted to 644,000 metric tons in 1948 as against 453,000 tons in 1947. These quantities are still far short of the imports of 1,247,000 tons of oilseeds in 1938.

Little change in the volume of imports of fats and oils of 1949 is foreseen by the Food Administration. Imports of all fats and oils are expected to total 371,000 tons as compared with 368,000 tons in 1948. Imports from the French Oversea Territories are expected to increase from 191,000 tons in 1948 to about 205,000 tons in 1949. Purchases from foreign sources may decline from 177,000 tons to 166,000 tons.

Major items in purchases from foreign sources will be copra from the Philippines and peanuts, soy, or other seeds yielding so-called fluid edible oils from the United States and other exporting countries.

U.K. Export of Soap

Exports of soap from the United Kingdom in 1948 totaled 383,469 hundredweight against 247,322 in 1947, and 578,561 hundredweight in 1938. Toilet soap exports amounted to 116,240 hundredweight in 1948, against 61,881 in 1947 and 61,841 in 1938. Other soap exports totalled 62,314 hundredweight in 1948 against 56,250 in 1947 and 85,829 in 1938.

Executives Promoted by Lever

James Barnett, vice-president and general manager of the Pepsodent Division, has been made vice-president in charge of advertising for Lever Brother Co. William Burkhart has become vice-president in charge of manufacturing and traffic. Dr. Theodore Rider has been named director of research. Robert Elder, Arthur MacIntyre and Alexander Stewart, vice-presidents, have been named to the planning committee. John Bodman is chief development consultant.

Soap Picture in Malaya and Singapore

Production of soap in Malaya and Singapore during January and February 1949 totalled 67,472 hundredweight, a decrease of about 11.4 per cent from the like period of 1948. Sales of locally manufactured soap in the two-month period amounted to 42,688 hundredweight, a decrease of 2.4 per cent from the year before.

Imports and exports were as follows (in hundredweight, with comparative 1948 figures in parenthesis): Imports—washing soap, 8,812 (8,900); toilet soap, (2,338 (1,109); other soap 728 (709). Exports—washing soap, 22,142 (30,016); toilet soap, 19 (39); and other soap, 113 (6).

Practically all the soap imports were from the United Kingdom. Exports were shipped largely to Hong Kong, Sumatra, British countries in Asia and Arabia.

WASHINGTON PANORAMA

by ARNOLD KRUCKMAN

AT the initiative of Congressman Emanuel Celler of Brooklyn the Judiciary Committee of the House has established a sub-committee to investigate monopolistic and anti trust practices for the purpose of devising sweeping reforms. The sub-committee is headed by Congressman Celler and includes Congressman Clifford P. Case, D., N.J.; Denton, D., Ill.; Kenneth B. Keating, D., N. Y.; Congressman Earl C. Michener, D., Mich., Congressman Frank Wilson, R., Tex.; and Congressman Francis E. Walters, R., Penn. The Chairman also is a Republican.

This sub-committee is expected to explore the entire field of fair trade practices rules. In all likelihood the controversy over the Fair Trade Practices Rule for the Toiletries, Cosmetics and Perfume industries, now hanging fire in the Federal Trade Commission, will be thoroughly plowed over in the hearings and deliberations of the new Committee. It has had merely a few meetings to define its purpose and to lay out its program. It also must obtain adequate funds from the Congress to make its investigations. As soon as its work is launched, and its investigators go into the field, the T-C-P industries may expect visits from these men and women who will make inquiries in all parts of the field where the trade practices may be employed.

The investigation undoubtedly will extend over several months, and will unquestionably be accompanied by a fanfare of publicity. It is a subject of wide and active interest to all the business communities in every part of the United States. The hearings will unquestionably bring out startling statements and suggestions. Congressman Celler is an old hand in Congress and knows the ropes in the business of capitalizing the utmost that may be had in publicity. There is no doubt there will be much publicity. Next year is the biennial period when all the members of the House must stand for re-election, and at least one-third of the members of the Senate must campaign for their jobs. A popular, and dramatic, issue such as anti-trust and monopolistic practices, makes excellent campaign publicity for the member of Congress who is on the right side of argument.

Meanwhile, the Federal Trade Commission has done nothing further about those fair trade practice rules. It is not really expected to do anything about them, now, because the Commission is actually shorthanded, and the steaming, muggy, intensely uncomfortable Summer months in the Capitol are not conducive to any more serious tasks than are absolutely urgent and immediately pressing. Any controversial subject is almost automatically placed on the deferred agenda until some extraordinary cause or pressure forces it to the front. No Government agency, either on the Hill with Congress, or down in Foggy Bottom with the Executive Agencies and Departments, will voluntarily function any time on subjects that may be deferred.

F.T.C. WORK PILES UP

There are now only four members of the Federal Trade Commission; the lack of the fifth member seriously piles up more case-work on each of the remaining four. This obviously slows up the processing of the work under the most propitious circumstances. Things being as they are the Commission, a human institution, would be unnatural if it did not instinctively take advantage of the lack of the fifth member, especially since the void is due wholly to Congress itself. The Senate, which must approve and confirm the nomination of all appointments, of the salary level of a Federal Trade Commissioner, has simply refused to act on the nomination of John Joseph Carson, the 60-year-old light and driver of the national cooperatives. The Senate, apparently, is responsive to the influence of the great corporations, which are opposed to Carson. It would be unnatural if they did not try to keep him out of a place of power and influence, especially a job so vitally important to business.

It is expected the Senate Committee will consistently and persistently sit on its hands until the session ends late in July, or in August. And when the session has ended it is expected the President will be just as consistent and persistent in taking the naturally inevitable step of giving Carson a recess appointment, which will enable Carson to function on the Commission until Congress returns, and his appointment again comes up for action. Congress is expected to come back to the Capitol in November, possibly, but not probably, in October. It also is possible it may not return until next January. At any rate Mr. Carson will have an opportunity to function and to draw a Government salary for three to six months.

The foregoing bits of Capitol history may give you a clearer idea about what is wrong with this Congress. They are saying quite boldly and openly, even in Washington, that this is the worst Congress we have had in the memory of living adults. It has the most striking record

for doing nothing important, and for stalling on every phase of legislation, and for squabbling and declining leadership of any kind, most of the observers here can recall. There are many things wrong with this Congress, all of them, of course, springing from the eternal human equation.

One cause of the stalemate is illustrated in the situation in the Rules Committee of the House. This is the Committee which is able to block legislation by denying the right to bring bills on the floor of the House, and by dictating the time that may be consumed in debating any measure, no matter how important.

Here is a move to watch. It has a bearing on your industries, and is important to all industries. A bill has been introduced by Senator O'Mahoney of Montana, which would provide circa $25,000,000 for a survey of the basic natural resources of the United States. It would involve minerals and all the things from which chemicals and natural oils are made. It also would cover power, water, timber, products of the field, and similar elemental resources.

The purpose is to make a survey that will be all-embracing, all covering, so that there would be no gaps in the information about any of these resources. Today the information available, from all sources, is only fragmentary. It is hoped this survey will lead to that place where Government may be able to utilize some of these resources, now unused, for the common good. It does not appear to be their intention to use the plan to initiate a public ownership program. The idea appears to be that such resources can be effectively used only when they are veloped under a highly concentrated administrative and executive leadership. Such processing would be economic, unwasteful. Those who are dreaming this plan would just as soon use the machinery of the great corporations, monopolistic or otherwise, as that of any of the public agencies.

NEW CONCEPT OF GOVERNMENT

It is obvious the whole tendency in this development is to form a new concept of the organization of Government, and the function of Government. Under this program the Government apparently would be less political than in its present incarnation, but would be more functional in the sense of an industrial organization. Obviously, under such dispensation the present composition of Congress would be entirely inadequate. Men and women from industry, from commerce, from transportation, from the professions, techniques, and the skills, would be needed to supply the expert knowledge to conduct the national business. This obviously is somewhat close to the Corporate State, the very antithesis of the Communistic and Socialistic and Welfare State.

Under the supervision of the ECA, numerous international transactions in essential oils have recently been made. Full details are available to interested firms.

It is generally believed here that in order to obtain the vote of the majority in Congress for an increase in taxes, the President may approve a general revision of the excise taxes, including reduction of taxes on perfumes, cosmetics, toileteries, and even railroad and other transportation fares. The subject is under discussion and negotiation.

The Bureau also reports that prices of industrial oils and menthol coming from China are higher. There has been discussion with authorities concerning the prices of camphor products; friendly overtures to the reduction of prices apparently are progressing. Not much Chinese camphor has come into the United States since before war. The products of Formosa have naturally been curtailed, being under the control of the Japanese. There is every inclination among those at interest to develop a better market for the products by making the prices more consistent with American levels. It is reported peppermint, citronella, and musk, as well as export essential oils, perfume materials, from Shanghai, the first four months of 1929 totalled in value $41,000. This includes 900 pounds peppermint oil, $3,610; 26,400 pounds citronella, $23,732; musk 84 pounds, $10,939. During the same period Shanghai exported 54,900 pounds menthol worth $347,767. India and Pakistan, 997 kgs. menthol crystals valued at $16,643; Singapore shipped 544 kgs., valued at $10,095; the United States received from various sources 2,722 kgs., valued at $38,905.

The Union of South Africa sent us 1,000 pounds refined camphor valued at $2,050; Hawaii, 1,400 pounds $2,976; India and Pakistan, 2,300 pounds, $5,750. In 1948 the Japanese exported 1,088 peppermint oil, valued at $9,248 none of which came to the U.S.

French Guiana thus far in 1949 has shipped out 60 metric tons of sweet orange oil.

The Bizonal area of Germany imported gums, resins, and balsams, in 1948 to the value of $1,334,800.

In 1948 the Belgian Congo imported 5,354 kilograms of essential oils, for use in perfumes, valued at something under $100,000.

German Bizonal area imports of essential oils for 1948 totalled a value of $1,205,300.

American Customs officials have hitherto declared that the Oil Amyris, originating in Haiti is not sandalwood oil, and has labelled it as spurious. This is obviously unfair because the Haitian producers have never claimed the oil is anything but a pure botanical oil, a pure product with its own inherent and useful properties.

Department of Commerce reports that imports of essential oils and perfumes into Peru during the first 11 months of 1949 were valued at approximately $1,000,000.

Also from the Department of Commerce comes the report that Indo China currently produces and ships Nux Vomica on about the same level as in the past. The main source in Cambodia remains plentiful, with high strychnine content. Exports for 1948 to the United States have remained at 289 tons, as in 1947.

As of April 25, 1949, the India Government has declared a quota of 5 per cent for natural essential oils, consumers being permitted to secure import licenses to cover 6 months requirements.

Norway imported oil essences, and perfumes to the value of approximately $1,000,000 in 1948.

Geranium, vetiver, yland-ylang, and mint were exported from Reunion Island in 1948.

Commerce Department reports we annually send $1,600,000 worth of essential oils to Holland.

Hong Kong sent us, during the first quarter of 1949, 11,340 pounds cassia, worth $16,266; aniseed, 265,320 pounds, $172,640; camphor, 4,000 pounds, $673; ho, 1,632 pounds, $1,808; cornmint, 1,728, $6,971.

Hints for Improving Production

Industry growing. . . . Trend is to shift from many hand operations to mechanical operation. . . . Value of help from equipment makers. . . . New and improved equipment

CHECKING over the figures of annual sales of toilet preparations from 1914 to 1949 it is evident that this basic industry is growing steadily. Each year, as the McCann Erickson survey disclosed, irrespective of disposable income development, sales of toilet preparations increase about 3.3 million dollars per year. And when one considers that the per capita sale of tobacco is $41 and that for all toilet preparations is only $8 it is evident that the field is vastly undersold. The war time kinks have been pretty well ironed out and the industry is moving ahead on a sounder basis. The same may be said of the allied flavoring products and soap industries.

Hand or Mechanized Operation?

As the industry grows, new companies come into the field; smaller companies grow into larger ones; and the larger ones seek to improve their products and make their production more efficient.

Many of the smaller companies as well as some larger ones which have unduly utilized hand operations are giving thought to shifting to mechanical operation. To get more production by hand more help must be employed and in many instances available floor space does not permit this. Wise mechanization largely solves the problem of getting more floor space and overcomes the burden of increased fixed charges. At what point machines should supplant hand operation must be determined by answering the question of whether the operation warrants mechanization.

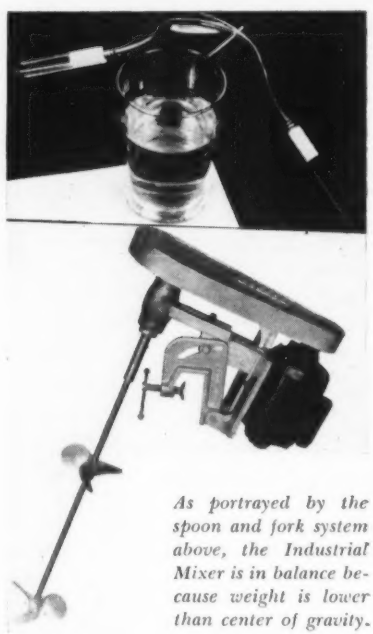
In considering this for a packaging operation, for example, it should be borne in mind that factors such as the shape and size of the container and the labels must be considered. Even sizeable variations in them may prove to be inconsequential in hand operations but with machine operations may produce unsatisfactory results. The same principle holds true of other operations. Thus the size of the bottle opening, the length of the neck and the shape of the bottle might present serious difficulties if filling by machine were attempted, whereas with hand operation it would present little trouble. Likewise if the bottle or package it top heavy or its shape unusual it might cause piling up on the conveyor. An unusually shaped container may make it difficult to secure an accurate register in labeling by machine.

For these and other equally cogent reasons it is advisable to seek the counsel of the machinery manufacturer and to let him pass on the materials to be used. In doing this it is well to bear in mind that above all else the machinery manufacturer is eager to make his equipment a profitable investment to the customer. To follow his suggestions in some cases may involve added costs for material but in the long run, experience has shown, the benefit that follows mechanization offsets this and leads to more profit.

It is not improbable that for some operations semi-automatic equipment with an efficient conveying system which is more readily adaptable to varying conditions, rather than completely automatic equipment will be suggested. This arrangement, especially in smaller plants, makes it possible to meet varying conditions whenever required. However the choice between semi-automatic and completely automatic equipment cannot be determined by any general rule; the choice must be governed by conditions in the whole plant. Whatever the choice, machine operation gives the manufacturer of toilet preparations or allied products the benefit of greater productivity and lower costs.

Portable Industrial Mixer

A new portable belt type industrial mixer designed so that its motor hangs on the outside of the mixing tank out of the path of harmful mixing fumes and spray is offered by the United Electric Motor Co. The entire unit is always in perfect balance, it is pointed out, because



As portrayed by the spoon and fork system above, the Industrial Mixer is in balance because weight is lower than center of gravity.

the weight of both mixer and motor is carried below the center of gravity requiring little or no pressure on the clamp to hold the unit on the edge of a tank or drum. The unusual arrangement, it is added, also eliminates the possibility of oil or grease dripping from the motor to the mixture. The mixer is said to be especially useful in small or medium sized plants where production schedules call for more than one mixing job, each one of which may require a different mixing speed for utmost efficiency. Precise mixing speeds, it is stated, may be obtained by simple pulley changes. Interchangeable belts and pulleys are said to make adjustments possible for mixing light, medium or heavy materials.

New Closed Top Tanks

A complete new line of closed top storage and settling tanks, an addition to the Alsop line of stainless steel tanks, has been announced by the Alsop Engineering Co., Milldale, Conn. The new tanks are available from stock in a complete range of sizes from 5 to 250 gallons capacity. The new airtight storage and settling tanks (non pressure) are constructed of 16 gauge stainless steel and are all welded. The all rounded corners, highly polished crevice-free surfaces and fast self draining bottoms make them, it is pointed out, simple to clean and keep sanitary. The stainless steel cover with a heavy rubber gasket for positive air tight protection features a 2 in. center opening with a rubber cork for easy filling or may be had with standard I. P. S. or sanitary fittings. One or more faucets can be

Storage & Settling Tanks

supplied when desired, positioned to the customer's requirements, for settling tank usage so that clear liquid can be drawn off from the upper faucet for final filtration, filling bottles or processing. The lower faucet is then used to drain off any remaining sediment. Alsop Hy-Speed mixing units, available in a wide range of horsepowers, propeller combinations and speeds, can be placed through stuffing boxes on either top or side of these closed tanks if desired. The tanks are available with sloping bottom for complete fast draining or with flat bottom for mounting on racks or tables. All are supplied with stationary or portable stands. Valves, faucets and liquid level gauge glass assemblies are available with these closed tanks.

Midget Size Mill

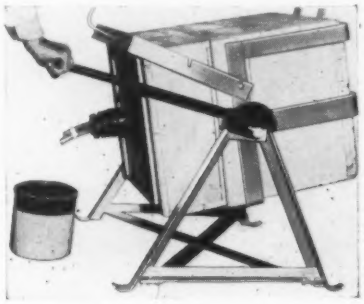
A new midget-size mill which grinds, emulsifies, homogenizes,

New Midget Mill

mixes, disperses and disintegrates has been announced by Morehouse Industries. It measures 10 in. wide and 31½ in. high and weighs 135 lbs. It is designed for custom runs and laboratory testing of chemicals, etc. A water cooling system makes long production runs possible, it is stated. All parts are stated to be readily accessible and interchangeable and adjustment for various grind sizes may be made without stopping.

Safety Carboy Tilter

A new safety carboy tilter with pouring spout is offered by the General Scientific Equipment Co. to provide a safe, fast and convenient method of draining liquids from carboys. It is made to fit carboys of



Ratchet Control of Position

any size. The cradle and supporting base are made of structural steel and all members are riveted or welded to insure a strong, durable unit. A locking device permits the carboy to be positively held at any angle for pouring so that the whole operation may be done by one man. A new safety air vent pouring spout is designed to insure an even flow of liquid without spurts or splashes, and it is made of acid resistant rubber and plastic tubing for long wear. The flow capacity is 5 gal. per minute. The long handle operates the tilter easily. The tilter, it is pointed out, may be left in a position just above the flow of the liquid so that it is not necessary to return the carboy each time all the way to a pouring position. This eliminates much waste motion and saves time when a number of small containers are being filled in succession.

Automatic Boilers

Alert, completely automatic, vertical fire tube boilers each on its own integral steel platform, are boxed and shipped fully assembled with everything in place ready to operate when supplied with fuel, water and current according to the Alert Boiler & Manufacturing Co. The boilers need no foundation and only a stove pipe flue. All parts and controls, it is pointed out, are out in the open where they are plainly seen and easily accessible. The boilers range from 3 hp. to 50 hp. and may be fired with manufactured gas, natural gas, bottled gas or fuel oil. The company specializes in boilers for practically every process steam purpose.

NEW PRODUCTS AND PROCESSES

Two New Glycols

The initial synthesis of two new glycols has been announced by Carbide and Carbon Chemicals Corp., New York, N.Y. These glycols are substituted 1,5 pentanediols: 2-methoxymethyl 2,4-dimethyl pentanediol-1,5 and 2-ethoxymethyl 2, 4-dimethyl pentanediol-1,5. These pentanediols combine the chemical characteristics of glycols and glycol-ethers. Each is expected to assume an important place in the chemical industry.

New Foaming Detergents

Five new anionic foaming detergents, known as Antarons, have been added to the list of Antara Products, General Aniline & Film Corp. The new anionics are alkyl amide sulfonates.

Antaron L-135 is a mixture of alkyl amide sulfonate and sodium chloride, comes as a light yellow powder, is soluble in water and electrolytic solutions, and is stable in acids, alkalis and through temperature change. It has a density of 0.54 and is used for most general cleaning operations.

Antaron L-177 is a more concentrated form of L-135. Its density is 0.76.

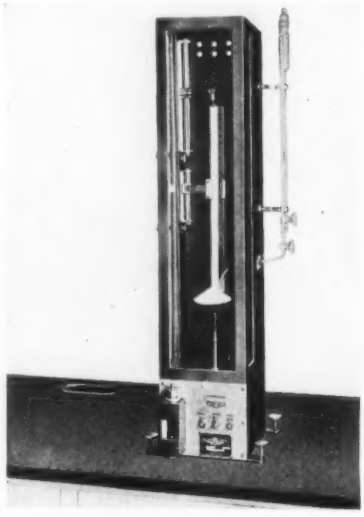
Antaron N-185 is a similar product which comes as a buff-white powder, with a slightly sweet odor.

Antaron L-114 is a light yellow gel. It is stable in acids, alkali, hard water, metal ions, boiling water and storage. Antaron R-275 is a grey-white powder. It is stable in hard water, metal ions, boiling water and storage. It is soluble in water, hard water and electrolytic solutions. Its density is 5.7.

Evaporometer

The Precision-Shell Evaporometer for determining evaporation rates, is offered by Precision Scientific Co. The automatic filling microburet releases a sample on the filter paper cone which is suspended from a helical quartz spring, and is rotated by a motorized electro-magnet to distribute the sample evenly. After the cone is "freed," the spring rises as the sample evaporates.

Knobs on the outside of the case raise or lower the spring and cone



Evaporometer

assembly, the scale, and mirror. When the sighting disc just above the cone and its reflection are aligned with a scale calibration, an exact height reading is obtained.

The case is fitted with an outlet for a timing mechanism which can be operated by a switch on the panel. All switches are here located.

The volume of air drawn through the apparatus is indicated and controlled by an adjustable rotameter. A serrated hose connection at the base is provided for connection to a vacuum line.

Cation Exchange Resin

Availability of a high-capacity cation exchange resin in commercial quantities has been announced by the Resinous Products Division of Rohm and Haas Co., under the name Amberlite IR-120.

It is used for domestic and commercial water softening. The resin shows an adsorption capacity of 300 kilograms per cu. ft. at efficient regeneration levels and high efficiency at reduced capacity levels, it is stated.

The resin is said to show no deterioration in waters of low silica content. Immersion in boiling water for an extended period of time and contact with strong oxidation-reduction media at elevated temperature (190 deg. F.) do not affect it adversely.

New Catalogs

The Dennis Chemical Co. has published a 4-page folder entitled Perma-Skin Vinyl Corrosive Resistant Protective Coatings. The folder is available to anyone interested in combatting corrosion of metal, wood, stone, brick, etc.

The Dow Chemical Co., Midland, Mich., has announced the availability of a semi-technical booklet on Dow Latex 512K. The booklet deals with the use of 512K as a pigment binder, in blends with adhesives and its use in coating colors. It may be had without cost.

The Hinde & Dauch Paper Co. has printed a new, revised edition of How to Stack and Load Corrugated Shipping Boxes. The booklet lists the fundamental rules of good storage and offers some excellent suggestions on the proper way of loading and unloading freight cars and trucks, on the best methods of estimating and using storage space, on the right distribution of weight in storing shipping boxes, on the most efficient arrangement of tiers, etc. Copies are available upon request.

THE ROUND TABLE –

Florida Passes New Fair Trade Law

To meet the objections raised by the Florida Supreme Court in declaring the previous Florida Fair Trade Act unconstitutional, the State Legislature has enacted a bill legalizing Fair Trade agreements in the State. It went into effect June 1, 1949.

Post Exchanges to Collect Excise Tax

Beginning August 1, Army Post Exchanges and Navy Ship Stores will collect a 20 per cent Excise Tax on cosmetics.

Guenther Lectures On Coast

Presenting four lectures with colored motion pictures, two on The Production of Essential Oils in Africa, and two on Essential Oil Production in the Western Hemisphere, Dr. Ernest Guenther, vice-president and technical director of Fritzsche Brothers, Inc., New York, N.Y., completed his current Pacific Coast tour with a talk before the Scientific Section of the California Cosmetic Association, June 28. He is to participate in the Institute of Food Technologists' Convention in San Francisco, where he will speak on Citrus Oils and Their Methods of Extraction.

The tour was directed by Stanley Crouch, assisted by John T. Bricker. Dr. Guenther's talks were made in Seattle, Portland, San Francisco and Los Angeles. At the Los Angeles meeting, during intermission, the audience was addressed briefly by Dr. A. J. Haagen-Smit, Professor of Bioorganic Chemistry of the California Institute of Technology, and author of that chapter of Dr. Guenther's "The Essential Oils."

Dr. Guenther will return to New York late this month to put the finishing touches on his next three volumes of "The Essential Oils."

Dr. Ernest Guenther

First Meeting of Fragrance Foundation Held

The Fragrance Foundation, newly formed organization for the education of women in the use of fragrance products, held a luncheon-meeting June 23, at the Waldorf-Astoria Hotel.

J. S. Wiedhopf

The meeting was conducted by J. S. Wiedhopf, who reported on the activities of the committee to date. Hugo Mock reported on the legal aspects of the formation of the Foundation. The method of operation of the Foundation was given by Miriam Gibson French, coordinator. Paul Russell spoke on the reasons a manufacturer would benefit from becoming a member. Mr. Wiedhopf announced that election of officers will take place at a meeting of the entire membership to be held in the Fall.

Luis de Hoyos Jr. Wins First Prize in Fishing Contest

Luis de Hoyos Jr., vice president of Synfleur Scientific Laboratories, Monticello, N.Y., won first prize in the Fourteenth Metropolitan Miami Fishing Tournament for the largest permit caught. The fish weighed 35 lb. 8 oz. and was only 2½ lb. lighter than the world's record for this species. He was the only angler to be awarded citations in all three tackle divisions in the tournament. Citations in the Miami tournament are highly prized by members of the angling fraternity as there are thousands of entrants each year.

Cost Reductions Theme For Western Packaging Meet

Cost reductions in the fields of packaging, packing and shipping will be the basic theme for all sessions of the forthcoming second Conference on Packaging, Packing and Shipping, to be held concurrently with the second annual Western Packaging Exposition at San Francisco Civic Auditorium, August 9-12.

Miriam Gibson French (second from left), Coordinator of The Fragrance Foundation and Pierre Harang (second from right), appear as guests on WNBT'S Make-Up With Del Russo (third from left). Barry Barnard, television director, rehearses just before the program. Onlookers are models.

Pennock Feature Speaker Before the TGMA

Members of the Toilet Goods Manufacturers' Assn. of Canada, meeting for its 21st annual convention at the Manoir Richelieu, June 18, elected the following officers to conduct the association's affairs for the next twelve months: President, Peter P. Powell (Yardley of London, Canada, Ltd.); first vice-president, T. L. Gosnell (Zonite Products Corp.); second vice-president, Frank C. Cleary (Richard Hudnut); honorary treasurer, Roy C. Lewis (Roy C. Lewis Co.); honorary secretary, G. F. Bullock (Rexall, Canada, Ltd.). The past president is F. J. Jackson (L. M. Parker Co.).

Directors are: Andre Borel, H. E. Dwyer and G. H. Bourassa, Montreal, and G. F. Bullock, R. A. Hollenbeck, J. N. Catto, J. C. Lockwood and Henri H. Kolin of Toronto. Associate members appointed J. L. Housley of Toronto and H. K. Vale of Montreal to act as their representatives to the official board.

The association includes 93 firms engaged in the manufacture or distribution of perfumes, cosmetics and toilet articles, and 61 associate members who are suppliers to the industry.

The founder and first president of the TGMA, Albert Bellefontaine, of Laboratories Bellefontaine, Ltd., Montreal, who has attended every convention, took an active part in the proceedings, and he and Mrs. Bellefontaine cut the huge twenty-first Birthday Cake baked by the Manoir Richelieu chef. Each of the delegates and their wives received a token cake with one candle and the inscription "21."

Charles A. Pennock

Feature guest speaker at the convention was Charles A. Pennock, president of the Toilet Goods Association, Inc., and president of Richard Hudnut Sales Co. Mr. Pennock stated that in his opinion there was no truth in the rumors that business is due for a slump. Sales in the toilet goods industry in the United States were up 3 per cent over last year, which Mr. Pennock characterized as a "healthy leveling off following a zoom, following a peak which no one could have foreseen."

Admitting that there was a lot of "uncertainty in the industry today with many people spreading gloom," Mr. Pennock warned the delegates that "we need more time for thinking about our business, because our business lives and thrives on new ideas. He suggested that each firm analyze its methods and policies to determine what steps should be taken to operate at peak efficiency. Appealing directly to heads of companies, and sales managers, Mr. Pennock said: "Please don't trim your advertising budgets too low," and pointed out that the real competition for members in the toilet goods industry was not far from their own field, but from manufacturers in other lines who were actively bidding for the customer's dollar.

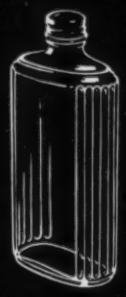
In closing, the speaker paid tribute to the salesmen of the industry who had helped to build it from a small group with no standing, to one which employed thousands of workers, doing an annual volume of nearly a billion dollars.

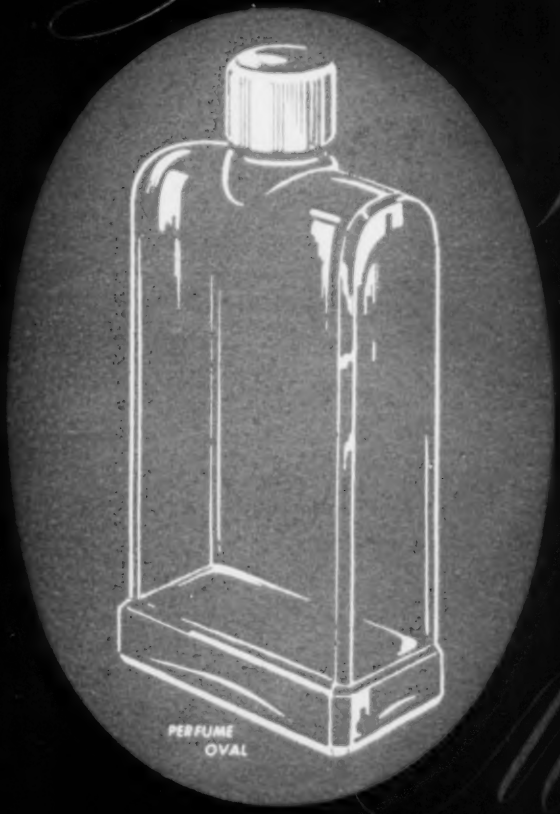
Over 150 delegates and their wives from various parts of Canada and the United States attended the meeting. The 1950 convention will be held at Bigwin Inn, Muskoka, Ontario, June 15-18.

As a token of appreciation for his services as president during 1948-49, F. L. Jackson is presented with a tray set with fishing flies. On Mr. Jackson's left is Mrs. Peter P. Powell, wife of the new president, while on his right are Mrs. T. L. Gosnell, whose husband was elected first vice-president. On the extreme right, Peter Powell and Howard Holcomb.

Mrs. Powell, wife of the new president of the Toilet Goods Manufacturers' Association (Canada), is presented with a bouquet of roses by Howard Holcomb, general manager of the convention. On the extreme right, Mrs. Jackson holds a bouquet of roses she received as well as a gift of candelabra. The husbands of the two ladies are shown on the left.

Smart Designs for Selling





If yours is a product that must be seen to be appreciated . . . show it at its best in smartly designed, crystal clear Maryland Glass . . . the package with attention value and sales impact. Shown here are a few of the popular designs always carried in stock in a complete range of sizes.

Let Us Send You Samples . . . just tell us the nature of your product and the sizes in which it is packed. We'll submit appropriate stock designs.

Or, if you use bottles or jars in large quantities, let our design experts work with you to create a special design for your exclusive use. Write today: MARYLAND GLASS CORPORATION, Baltimore 30, Maryland.

PACK TO ATTRACT IN

Maryland Glass

the fourth dimension

# of beauty is fragrance

A great perfume is like an artist's brush. It paints a woman's portrait with flattering touches of fragrance, drawing out her inner beauty, presenting it in a glamorous new dimension that accentuates her every charm. To create such a perfume is difficult—an art that demands materials of the highest quality. The skill of Givaudan in developing such materials is well known. Among Givaudan's many famous products is

jasmin blanc extra

Just as there is nothing in the realm of fragrance with the beauty and unceasing popularity of jasmin, so there have been few perfume creations with the success of Jasmin Blanc Extra, capturing and expressing the character of the living flower. Indispensable as the heart of a composition where the jasmin note is prominent, Jasmin Blanc Extra has, in addition, some of the basic characteristic of the Absolute and, as such, is a valuable additive in all floral bouquets.

Greater Distinction through

Givaudan-Delawanna, Inc.

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Reigate Castle Gateway

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STRENGTH, PERMANENCE and STABILITY

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SIPMHE Announces Exposition Plans

The Society of Industrial Packaging and Materials Handling Engineers has announced that its fourth annual Industrial Packaging and Materials Handling Exposition will be held in Detroit, October 4-6. Participating in the exposition will be Wayne University, at which institution a series of refresher courses will be conducted during the next academic years. Similar courses will be offered at Temple University and the University of Southern California.

Cosmetic Credit Men Enjoy Gala Summer Party

The usual good fellowship which is always found when two or more members of the Drug, Cosmetic and Chemical Credit Men's Association gather together was much in evidence June 17 when the annual Summer party of the association was held in Great Neck and Manhasset, N.Y.

The party assembled before luncheon and while some played golf or bridge during the afternoon others went to the movies or enjoyed the hospitality afforded in bountiful measure at the Summer home of Nat Otte in Great Neck.

In the evening the banquet was held at a popular night spot in Manhasset on the water's edge and following this informal gayety reigned until a late hour.

The complete success of the affair which was well attended was due in a large measure to the work of Nat Otte and the hearty cooperation of the officers: Chairman Charles F. J. Noble; vice chairman Andrew F. Dragoset; treasurer, John H. Alexander; and secretary R. Douglas Sheldon Jr.

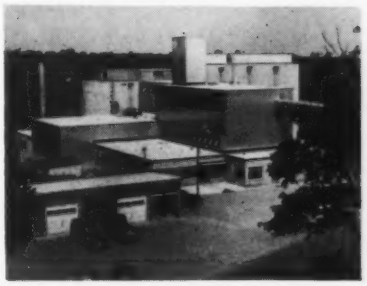
F. Ritter Building in California

F. Ritter & Co. announces the start of construction of an additional essential aromatics plant at 4001 Goodwin Ave., Los Angeles, Calif., which will serve as its world headquarters. The new air conditioned building, of reinforced concrete construction, will be one of the most modern and complete plants in America for the manufacture of flavoring, essential aromatics and essential oils.

Greatly increased space and facilities will be provided for the manufacture of essential aromatics for the perfume industry. There will also be additional laboratories for analysis and for research. Buttress & McClellan are construction engineers for the new plant.

Chemical Industries Exposition Taking Shape

The twenty-second Exposition of Chemical Industries, to be held in the Grand Central Palace, New York, N.Y., November 28 to December 3, gives promise of filling all available space.



Gouverneur Talc Company's new million-dollar plant, recently constructed at Baltmat, N.Y., will produce Nytal 300.

Air-Milled Talc From New Plant

Nytal 300, recently introduced by the R. T. Vanderbilt Co., New York, N.Y., is a sterile talc of unusually fine particle size produced by a unique process in a new million-dollar plant of the Gouverneur Talc Co. at Baltmat in St. Lawrence County, N.Y.

In the new process developed by the Vanderbilt Co. the ore is first dried and then air-milled at high temperature and pressure. The action of the talc particles against themselves in this new process is said to break particle size down to a fineness unobtainable by conventional methods. As a result, Nytal 300 has increased covering power and resistance to wetting, greater adherence, and greater softnness of application. The talc possesses a fine white color.

E. P. Utter, Edwin Kavanagh, Ray Holliday and Nat Otte relaxing before the banquet

Charles F. J. Noble talks with Mrs. John Alexander

Ray Holliday chats with J. Gottesman

Foursome: Mrs. S. Felsin, Mrs. J. Gottesman, Mrs. E. Candee and Mrs. N. Otte

William and Robert Otte snapped with Mrs. J. Otte at the banquet

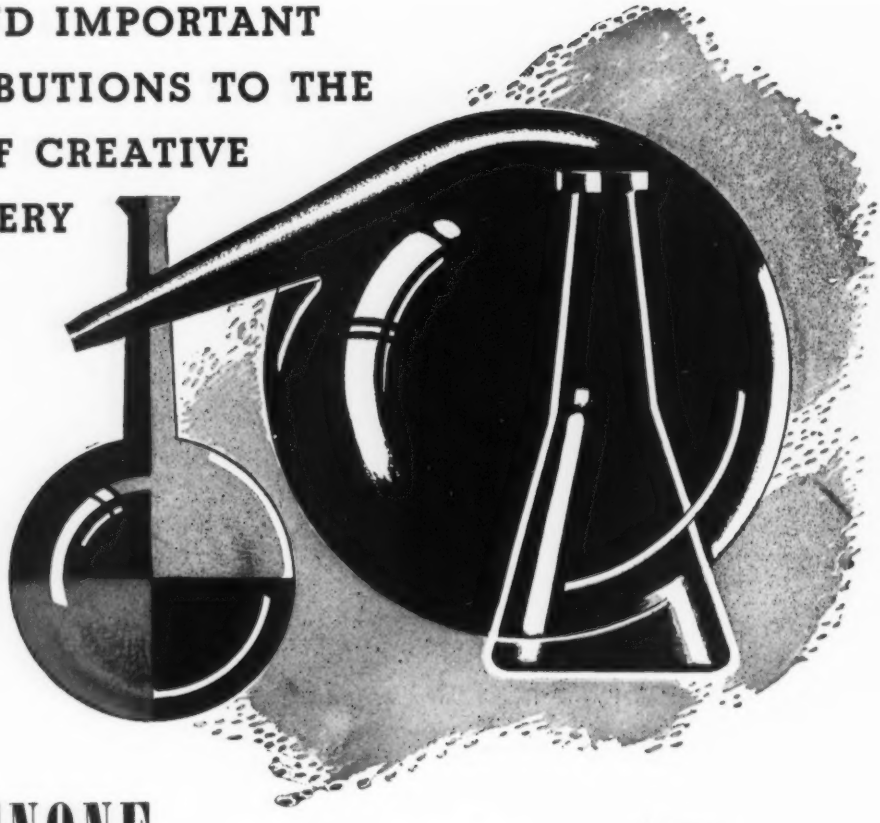
Mr. and Mrs. Edgar Smith having a very good time

Herbert Kranich discusses the need for wholesome recreation

Mr. and Mrs. Wesley E. Foster listen to a Dodger baseball fan

Announcing

NEW AND IMPORTANT CONTRIBUTIONS TO THE FIELD OF CREATIVE PERFUMERY



GELSENONE

12.00 lb.

A NEW aromatic chemical with the true, waxy note of natural Jasmin. Recommended for use in all compounds where a fine Jasmin effect is desired. Suggested use 5%-10%. Extremely stable with important fixative qualities.

LEVANTONE

13.50 lb.

A NEW aromatic chemical of the sesquiterpene series, characterized by a rich, opulent, woody note of extraordinary tenacity. Levantone possesses the fragrant note of precious oriental woods, quite unlike santalol, vetiverol, etc., although it does blend well with these widely used aromatic products. For new distinctive effects in modern compositions use from 7%-12%.

FELTON Quality

FELTON CHEMICAL COMPANY, INC.

MANUFACTURING CHEMISTS

599 JOHNSON AVE., BROOKLYN 6, N. Y.

Aromatic Chemicals • Perfume Oils • Essential Oils • Flavors

BRANCHES IN BOSTON • PHILADELPHIA • LOS ANGELES • ST. LOUIS • CHICAGO • MONTREAL • TORONTO

Committee Chairmen Appointed for Annual DCAT Meeting

Robert B. Magnus, chairman of the Drug, Chemical & Allied Trades Section of the New York Board of Trade, has announced the following chairmen to head committees for the 59th annual meeting of the Section, to be held at Shawnee Inn, Shawnee-on-Delaware, Pa., September 23-24: Banquet Committee, L.I. Volckening; Business Program Committee, Fred J. Stock; Evening Entertainment Committee, Charles P. Walker, Jr.; Golf Committee, Harold C. Green; Greetings Committee, Carle M. Bigelow; Ladies' Card Party Committee, Charles M. Macauley; Ladies' Golf Committee, Mrs. Mel C. Eaton; Memorials Committee, William S. Auchincloss; Miscellaneous Sports Activities, Ira P. MacNair; Transportation Committee, Robert L. Hutchins; Reception Committee, Clark L. Rodgers and Registration Committee, J. P. Remensnyder.

S. B. Penick Elects Executive Personnel

James G. Flanagan has been elected a vice-president and Kenneth A. Lawder elected treasurer of S. B. Penick & Co., New York, N.Y., according to an announcement by S. B. Penick, Jr., president.

Mr. Flanagan is also general counsel and a director of the Company, and has been secretary since 1942. He joined the firm in 1938, after serving for some time as an assistant in the Attorney General's Office of New York State.

Mr. Lawder joined S. B. Penick & Co. in September 1948. From 1925 to 1948 he was with American & Foreign Power Co., Inc., and affiliated companies, holding the positions of comptroller, secretary and treasurer, and later vice-president and director of various of its subsidiaries.

After her first visit to the United States since the war, Mary Dunhill, founder of the internationally known firm bearing her name, has returned to England with her husband, Dr. F. Geoffrey Holman.

BIMS Golf Outing

On June 21, one of the hottest days of the month, over one hundred members of the BIMS played the golf course at Baltusrol.

Paul Dunkel got low gross on a 74, and Pel Livsey and Louis Bezard had low nets. The other prize winners were: Leonard H. Schultes, Edward Fields, Alfred Egerter, Walter Nuckols, Russel F. Rooks, M. Seltzer, Arnold Anderson, Ross White, Charles Alexander, Albert C. Burgund, William Morphy, Wallace Bush, C. R. Keeley, W. H. Davis, John E. Gabrielsen and Ivon H. Budd. The prizes were purchased by Harry Griffiths.

The next BIMS golf meeting will be at the Winged Foot, July 26, and following that at the North Hempstead Country Club, August 25.

CDACA Holds Annual Election Meeting

The Cincinnati Drug & Chemical Association held its annual election meeting June 24, in the Alms Hotel. Cocktails and an excellent dinner preceded the election.

The past president, F. M. Lukett, who has been transferred to Monsanto Co.'s office in Detroit, was presented with a robe and a certificate autographed by all members present.

New officers elected were: President, Andrew Lincoln; vice-president, Myron Hurney; treasurer, Frank Nowland; and secretary, Walter Eller.

The Board of Trustees consists of Andrew Lincoln, Myron Hurney, Frank Nowland, Walter Eller, R. J. Spatta, Lawton Daly, Edward Heiser and Pat Gaudin.

Purepac Buys Alcorub

The Purepac Corp. has purchased Alcorub from U.S. Industrial Chemicals, Inc., New York, N.Y. A national campaign on the product is planned.

Maurice Cola Flying Through Latin America

Maurice Cola, brother of the late Felix Cola, author of Le Livre du Parfumeur, who is consulting chemist for Roure Bertrand Fils & Justin Dupont, Grasse and Argenteuil, France and their agent in the United States arrived on the Queen Mary June 2. After spending a month in the New York laboratories of Roure Dupont Inc., Mr. Cola left July 8 by airplane for an extended trip throughout Latin America America where he will cooperate with perfumers and manufacturers of soaps and cosmetics in the solution of their problems involving the use of essential oils and aromatic chemicals. Mr. Cola expects to return to the United States in about eight months and will then spend several months here before returning to France.

Maurice Cola

Clark Heads Vanillin Sales for General Drug

William X. Clark has been appointed sales manager of the Vanillin Division of General Drug Co. Keith M. Baldwin has joined the Division's technical staff. He will specialize in the use and application of Vanillin. Although shipments of Vanillin are made from the plant at Rothschild, Wisc., stocks are maintained for emergency delivery at strategically located warehouses throughout the country.

Bunting Retires as Noxzema President

Dr. George A. Bunting, founder and president of Noxzema Chemical Co., Baltimore, Md., retired as president to become Chairman of the Board, June 22. At the same time, Dr. Bunting's son, G. Lloyd Bunting, became president and general manager.

STANTON'S THIOGLYCOLATES

AMMONIUM AND SODIUM SALTS

These products serve the top manufacturers of cold permanent wave products, and are highly desired as they come well within the required standards and specifications recently created for the trade.

Additional refinements, such as superior odor, water-white color and a complete absence of certain metallic salts, guarantee even better results than can be obtained with the ordinary ingredient.

Our automatic, continuous process plant now in top-running capacity assures a never-failing source of supply which is so necessary to an industry which runs to high volume.

Stanton's Thioglycolates are economical, effective and efficient. Try them.

STANTON LABORATORIES, INC.

(Plant and Main Office) 227 Krams Avenue, Philadelphia 27, Pa.

Hindle Returns From Extended Business Trip

J. L. Hindle, managing director of Standard Synthetics, Ltd., London, England, has recently returned from a business trip around the African continent. Covering over 14,000 miles, mostly by B.O.A.C. Flying Boat. Mr. Hindle called on business friends in Alexandria, Pretoria, Johannesburg and Capetown. In spite of current restrictions on imports, he believes the market for raw materials will expand in the Union of South Africa, as local manufacturers will be forced to produce more goods to overcome the threatened shortage of imported finished goods from the U.S.A. and Britain.

During his trip, which lasted over a month, Mr. Hindle also made stops at Augusta (Sicily), Luxor, Khortoum, Kampala (in Uganda), Victoria Falls, Pietersburg, Louis Trichardt and Bloomfontein.

Richard Webb Wins Five Blues in Harrison Horse Show

Richard Webb, son of R. R. Webb the well known essential oil executive, who takes his aged bay gelding Tops'l down South while he is attending Duke University brought his mount home when the semester was over and entered him in competition in the Harrison (N.Y.) Horse Show. It was an overwhelming success. With Mr. Webb riding, he romped to the open jumper championship by placing in every event winning five blues and scoring 29 points. Mr. Webb's outstanding effort was in the final stake event, over jumps up to 4 ft. 6 in. where he piloted Tops'l to the only clean performance. Tops'l, which Mr. Webb has owned for ten years, and which is a familiar figure in the Metropolitan circuit's show rings, placed third in the 1946 National Horse Show in Madison Square Garden, New York. During the past Winter he has been in various Carolina shows and was reserve at the Sedgfield Hunt recently

Dr. Alexander Katz of F. Ritter & Co. and Harold P. Thoreson of Buttress & McClellan turn the first spadeful of earth at ground-breaking ceremonies, Los Angeles.

Dr. Bonnell Appointed By U.S.I.

Dr. Daniel E. Bonnell has been appointed technical representative for California and Arizona by U.S. Industrial Chemicals, Inc., New York, N.Y. Dr. Bonnell formerly was president and general manager of the Western States Chemical Corp., Denver, Colo. His territory is a part of the Pacific Coast Division, of which R. E. Alexander is manager, with headquarters in Los Angeles. Dr. Bonnell's headquarters will also be in Los Angeles.

Dr. Daniel E. Bonnell

MacDonald Joins Ungerer's Quarter Century Club

George R. MacDonald, West Coast representative for Ungerer & Co., New York, N.Y., recently completed 25 years of continuous service with the company and became a member of its Quarter Century Club.

A suitably engraved wrist watch was sent to Mr. MacDonald by F. H. Ungerer, Chairman of the Board, as a token of the company's appreciation of Mr. MacDonald's long and faithful service.

Mr. MacDonald has occupied various positions in the firm, and prior to his transfer to the West Coast territory, was in charge of the company's Boston office. He is, at the present time, in charge of Ungerer's West Coast branch office, which is located at 3757 Wilshire Blvd., Los Angeles 5, Calif.

Air-view sketch of the new research center built by Carbide and Carbon Chemicals Corp., New York, N.Y. The structure is in South Charleston, W.Va. Back of the main building is the shop and power house. At the extreme back corner are cooling towers that serve high-pressure laboratories and the development buildings, which are, yet to be completed, appear at the rear right.

Yardley Appointed Purveyor to His Majesty

A Royal Warrant of Appointment as Purveyor of Soap to His Majesty the King has been granted to Yardley & Co., Ltd. The company has previously held the Royal Warrant as Perfumers to Her Majesty Queen Mary for many years, and also that to His Royal Highness The Prince of Wales.

John Kennedy on Extended European Tour

John Kennedy, president of Rexall Drug Co., Ltd., Toronto, Ontario, Canada, is on an extended business and pleasure trip in Europe. His schedule includes London, Nottingham, Stratford-on-Avon, Paris, Milan, Lucerne, Geneva, etc. Mr. Kennedy writes that he is visiting all the well-known perfume and cosmetic houses to advise himself of what is new, and that he is enjoying the entire trip immensely.

Meredith, Simmons Changes Name to National Adhesives

Meredith, Simmons & Co., Ltd. has changed its name to National Adhesives (Canada) Ltd. National also has operations in England, Holland and the United States.

With plants in Toronto and Montreal, and sales offices in Winnipeg and Vancouver, the company produces in Canada a complete line of pastes, adhesives, glues, etc.

MIRACLE DRUGS CANNOT CURE THIS SICKNESS

We only wish there *were* a miraculous drug to stop a man from worrying.

Hundreds of thousands would buy it, because constant worry over money literally makes sufferers *sick!*

It's a sickness, however, that miracle drugs cannot cure.

Yet . . . something 'way short of a miracle can!

That's saving! Saving money . . . the surest, wisest way. With U. S. Savings Bonds.

All you do—if you're on payroll—is join your company's Payroll Savings Plan.

Or, if you're in business or a profession, enroll in the Bond-A-Month Plan at your local bank.

You'll be pleased to see those savings grow. Ten years from now, when your Bonds reach maturity, you'll get back $40 for every $30 you invested!

Is it peace of mind you want?

Start buying Bonds today!

AUTOMATIC SAVING IS SURE SAVING—
U.S. SAVINGS BONDS

Contributed by this magazine in co-operation with the Magazine Publishers of America as a public service.

National Aniline in New Chicago Office

The Chicago office and Technical Service Laboratory of the National Aniline Division, Allied Chemical & Dye Corp., formerly located at 357 West Erie St., has been moved to Room 946, The Merchandise Mart, Chicago 54, Ill. The warehouse will continue its operation from the old address.

Beer-Bob Has Stepped-Up Sales Program

Murray Levitt has been made national sales manager of Beer-Bob, Inc., New York, N.Y., manufacturers of Beer-Bob Hairset. Mr. Levitt is setting up fourteen branch sales offices throughout the country, and is adding eleven new salesmen.

George Russell Elected President of CMRA

George W. Russell, assistant sales manager of the Industrial Chemicals Division of the American Cyanimid Co. was elected president of the Chemical Market Research Association for the year 1949-50 at the business meeting of the association, held June 9.

Other officers elected were: Kenneth Burger, vice-president; E. H. Bohle, re-elected treasurer; Fritz Von Bergen, corresponding secretary; and Paul Weller, recording secretary. Councilors-at-large include R. B. Schneider and A. J. Fisher. S. P. Gibson, retiring president, will continue to serve on the Executive Committee.

Canada Lifts Import Barriers to Non-Dollar Countries

Effective July 1, Canada lifted import barriers to non-dollar countries on perfumery, toilet preparations, hair oils, tooth and other powders and washes, pomades, pastes, and all other perfumed preparations used for hair, mouth or skin. It is expected to increase British sales in Canada by about $1,500,000.

House Approves Van Zandt Bill

The Van Zandt bill, preventing export of substandard foods, drugs and cosmetics, has passed the House without debate.

Luis de Hoyos Visits Havana

Luis de Hoyos, mayor of Monticello, N.Y., and head of Synfleur

Luis de Hoyos

Scientific Laboratories, Inc., recently made a flying visit to Havana. While there, he conferred with Manuel Moran and Edgar E. Dania, Synfleur representatives.

Majestic Products Sales Co. Opens New Showrooms

Majestic Products Sales Co. cele-

PLYMOUTH WAXES *For* CREAMS

This Spermaceti should not be confused with inferior hydrogenated sperm oils which are sometimes offered as Spermaceti The Plymouth Brand is the finest which can be produced and is produced from Genuine Sperm Oil by the cold pressing method. It is a very white crystalline wax containing no free oil, has a very low Iodine number and is free of any offensive odors.

PLYMOUTH Ozokerites

We offer two grades One is the highest quality obtainable, 76°-78° C melting point and the other grade lower in price and of lower melting point 66°-68° C. Both are guaranteed 100% Pure Bleached Ozokerites.

PLYMOUTH Sun-bleached White Beeswax U. S. P.

This is guaranteed to be a 100% Pure Beeswax and sun-bleached It is refined by the centrifugal method which removes all and every trace of foreign matter. We will gladly send samples.

PLYMOUTH White Cirine Wax

A special grade of White Ceresin Wax prepared for the cosmetic trade Absolutely white and odorless. It has a melting point corresponding to that of Beeswax so that in using it in connection with Beeswax in cream any "lumpiness" is avoided. Its use will also produce a very glossy cream.

We offer all grades of the U S.P fully-refined Paraffin Waxes.

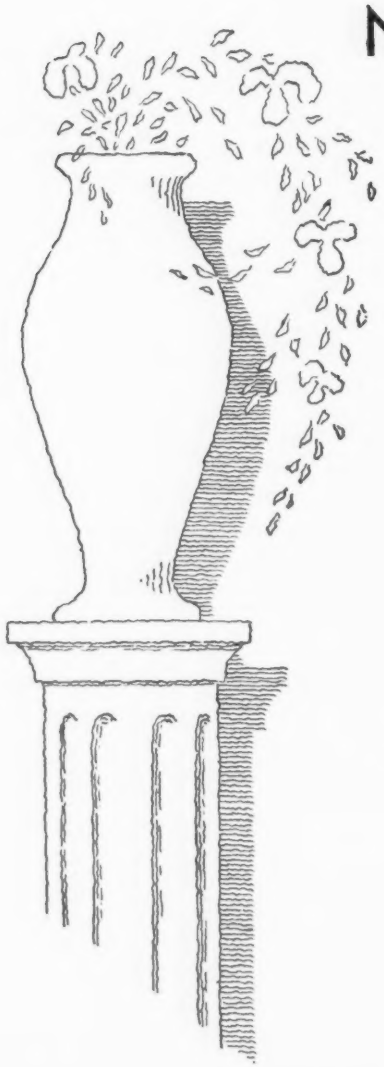
A COMPLETE LINE OF COSMETIC RAW MATERIALS

M. W. PARSONS

Imports

and PLYMOUTH ORGANIC LABORATORIES, Inc.

TOMBAREL PRODUCTS CORPORATION



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Surfine Essential Oils

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U.S.I. CHEMICAL NEWS

July ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1949

Versatile Pyrenones Give Unusually Wide Range of Pest Control

Highly Effective In Many Important Fields

From restaurant kitchens to huge grain warehouses, many of the most important and varied types of pest control problems are now being solved by U.S.I.'s Pyrenones. Combining unusual safety and effectiveness against a wide range of insects, their use is extending to many vital areas of pest control.

Proven inherently non-toxic to warm-blooded animals in three years of exacting tests, Pyrenones can be used safely on crops while they are growing, in warehouses where food is stored, in plants where food is processed, and in restaurants or homes where food is prepared for eating.

Protect Stored Grain and Grain Products

Pyrenone-type insecticides offer safe, long-lasting control of such grain insects as confused flour beetles, cadelles, grain borers, moths, and the yellow meal worm. For this reason, Pyrenones are highly effective in protection of stored grain or grain products in mills and warehouses, in ships' holds, in grain elevators, in grain box cars, and in interiors of farmers' grain bins.

Valuable Where Food Is Processed Or Prepared

In the important food processing industry, Pyrenone's combination of safety and effectiveness is particularly welcome. Insecticides containing Pyrenones quickly kill the

MORE

New Flat Plastics Lens Is Revolutionary Advance

A new, thin, flat plastics lens, described as revolutionary in the optical field, reportedly weighs only about one-tenth as much as a glass lens. It is cheaper to produce, and yet will magnify, focus, and in other respects perform just like a conventional glass lens, the makers assert. The new-type lens is said to derive its magnifying power from the fact that its apparently flat surface is molded into a series of small concentric grooves which refract light in the same way as does the unbroken curve of a glass or oil-filled plastic lens.

The lightness of the flat plastics lenses permits field lenses of very large area, and their thinness almost eliminates spherical aberration, according to the manufacturers. While not precise enough for the picture-taking lens of a camera, the new-type lens is expected to find wide use as a television magnifier, a production-line inspection lens, a slide-viewer lens, etc.

Makes Paper from Straw

Paper can now be made from almost any kind of straw, it is claimed, using a new chemical process. The individual straw fibers are reportedly broken apart without reducing their length.

17-Mile Channel Turns Land-Locked Harbor Into Excellent Port

Distribution Center for Hydrocarbon Synthesis Chemicals Will Have Access to Fine Facilities for Shipping by Water or Rail

Located at the Port of Brownsville, Texas — the youngest of all ports of major importance — U.S.I.'s new distribution center for hydrocarbon synthesis chemicals will have available the latest in docking, cargo-handling, and other shipping facilities. The port is an artificial harbor which has been connected with the Gulf of Mexico by a 17-mile, straight and unobstructed sea-level channel. The port's facilities include up-to-date docks, the latest in fireproof general cargo wharves, and modern freight and cargo handling machinery.

Construction of the hydrocarbon synthesis plant of Carthage Hydrocol, Inc., the chemical separation and refining plant of Stanolind Oil and Gas Company, and U.S.I.'s chemical storage, compounding and distribution center, is progressing rapidly and should be completed by the end of 1949. U.S.I. will distribute to industry or to its own plants all of the water-soluble oxygenated co-products of the hydrocarbon synthesis process.

New Docks Being Built

In addition to the fine docking facilities already existing at the port, a new 500-foot oil dock is being constructed for Carthage Hydrocol, and adjoining this, special docking facilities for the U.S.I. distribution center will be installed. The fact that transport by rail, barge, or cargo ship is so readily accessible to U.S.I.'s new Brownsville establishment helps assure U.S.I. customers of a dependable and continuous supply of the important alcohols, aldehydes, ketones, and acids to come from the hydrocarbon synthesis.

Low-Octane Motor Fuels Fortified with Alcohol Equal Regular Gasoline

A truck fueled in recent tests with 58-octane gasoline plus periodic injections of alcohol and water is said to have operated as well as it would on regular gasoline having an octane rating of 74 or better.

Researchers reveal that during at least 80 per cent of normal driving, when a car is running on the level at speeds up to about 40 miles per hour, the engine will run satisfactorily on gasoline of 50-octane number or even lower. For this reason, much of the anti-knock quality of ordinary gasoline — 74-octane or better — is in effect wasted. On the other hand, during acceleration, hill-climbing, and in general whenever the engine is working hard, a relatively high-octane fuel is required. Injection then of alcohol-water mixture into the carburetor can provide the needed anti-knock quality, increasing the effective octane number of gasolines by as much as 20 octane units, it is claimed.

Air view of Port of Brownsville, showing the harbor in the foreground and looking east along the 17-mile sea-level ship channel that connects it with the Gulf of Mexico. In the background, just to the left of the point where the harbor narrows into the channel, can be seen the site and the partly completed structures of the plants of Carthage Hydrocol, Stanolind, and U.S.I.

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July ★ **U.S.I. CHEMICAL NEWS** ★ 1949

New Fatty Acid Separation

Fatty acids can be separated from soybean, corn, and other vegetable and animal oils by fractional crystallization from acetone, followed by continuous vacuum filtration, a recent patent states. Chilling of the acetone solution causes formation of a two-phase mixture, according to the patent, with the fatty acids to be separated in the solid phase. Then, in a continuous cycle, filtration, washing, and drying are carried out in a vacuum-drum filter, and separation of unsaturates from saturates is claimed to be practically complete. Further separation of stearic from palmitic acid is also said to be possible.

Bone Cancer Is Treated With Radioactive Gallium

Bone cancer can now be attacked directly, a Navy medical man reports, by a radioactive isotope known as gallium-72. The gallium isotope has been tested on mice and dogs, and was recently approved for use on selected human cancer cases, the medical man revealed.

CONTINUED

Versatile Pyrenones

chocolate moth, cheese mites and skippers, fruit flies, silver fish, and cockroaches — yet they create no toxicological hazards.

Similarly, in the home and in restaurants where food is prepared for human consumption, Pyrenones give safe control of these insects, as well as other, common insects like houseflies, fruit flies, gnats, mosquitoes, ants, spiders, and bedbugs.

Controls Insects Attacking Dairy Cows, Range Cattle

Dairymen and cattle ranchers are getting outstanding insect control using a variety of Pyrenone-based formulations — water emulsions, oil-type sprays, dips, dusts, or wettable powders. Treated cows are healthier and give more milk; treated range cattle show sizeable weight gains, and there is no danger of contamination of meat or milk products by the insecticide.

Develops New Rocket Fuel Using Liquid Hydrogen

Using liquid hydrogen cooled to −423°F., researchers have developed a new rocket fuel that generates an exhaust which travels at a speed of 15,000 miles per hour, it is claimed. The university laboratory which developed the fuel has built a motor the size of a man's hand to burn the fuel, it is reported.

Sulfa Drug Damage Is Minimized by Methionine

The sulfur amino acid methionine prevents damage to the thyroid in rats caused by prolonged sulfadiazine intoxication, according to a report made recently in a medical publication. DL-Methionine is now being produced in quantity by U.S.I. to meet the increased demands of the pharmaceutical and feed industries.

Domestic Coal Can Supply High-Grade Montan Wax

Domestic coal sources could be exploited to supply large quantities of high-grade montan wax, recent investigations have shown. Montan wax was formerly imported from Germany, for use in carbon paper, insulation, and many other products.

Subject Index of Reports On European Technology

A new subject index and abstract collection of over a thousand unclassified scientific and technical reports, prepared by a special committee and dealing with European technology, is available now.

TECHNICAL DEVELOPMENTS

Further information regarding the manufacturers of these items may be obtained by writing U.S.I.

For laboratory testing of paints, inks, chemicals, etc., a small mill, said to grind, emulsify, homogenize, mix, and disperse these materials is now available. Adjustment for different grind sizes can be made without stopping and long runs are possible, the makers state. **(No. 469)**

A new adhesive tape for heavy packaging, said to be waterproof, and to have a tensile strength of 180-lbs. per inch of width, and a tear resistance of greater than 1600 gram-centimeters, is reported available. **(No. 470)**

Rust-proofing of fine instruments and other metal articles without greasing or air-tight sealing is possible now, it is claimed, simply by wrapping them loosely in chemically treated paper. **(No. 471)**

A flexible polyethylene pour spout for paint pails is said to be available now as an integral part of a new-type closure described as tamper-, vapor-, rust-, and leak-proof. **(No. 472)**

Carbonated beverages in any of six flavors can now be served, it is claimed, by dropping new, flavored tablets into a glass of water. Tablets eliminate handling of bottles and are said to take little storage space. **(No. 473)**

A new plastic electrical tape has a dielectric strength of over 10,000 volts plus the other electric characteristics of its parent material, polyethylene, the makers state. It is reported to be 10 times more moisture-resistant than vinyl types. **(No. 474)**

A high-flash-point, non-injurious solvent for removing paint, wax, grease, lube oils, or extreme pressure lubricants from skin, wood or metal surfaces is non-corrosive, according to the manufacturers. **(No. 475)**

Aluminum screws, machine bolts, washers, nuts, and nails are reported available now. The fasteners are claimed to resist rust when used with wood or aluminum construction, indoors or out. **(No. 476)**

For applying protective coating films of uniform thickness on plane surfaces, a new compact, direct reading laboratory device is said to be accurate and easy to manipulate, and to have adjustable clearance. **(No. 477)**

To clean and repolish floors in one operation, a new non-slip floor polish has been specially formulated for wood floors, but is also effective for linoleum, linotile, cork, and similar resilient floors, the manufacturers assert. **(No. 478)**

U.S.I INDUSTRIAL CHEMICALS, INC.

60 EAST 42ND ST., NEW YORK 17, N. Y. U.S.I. BRANCHES IN ALL PRINCIPAL CITIES

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Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined
Ethanol (Ethyl Alcohol)
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96%, Absolute
*Solox—proprietary solvent
ANTI-FREEZES
*Super Pyro Anti-freeze
U.S.I. Permanent Anti-freeze
***ANSOLS**
Ansol M
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ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate
OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate
PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate
OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloroanilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloroanilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate
ETHERS
Ethyl Ether, U.S.P.
Ethyl Ether Absolute—A.C.S.
FEED PRODUCTS
Riboflavin Concentrates *Vacatone 40
*Curbay B-G *Special Liquid Curbay
DL-Methionine
ACETONE
Chemically Pure

RESINS (Synthetic and Natural)
*Aroplaz—alkyds and allied materials
*Arofene—pure phenolics
*Arochem—modified types
Ester Gums—all types
Congo Gums—raw, fused & esterified
Natural Resins—all standard grades
INSECTICIDE MATERIALS
CPR Concentrates
Piperonyl Butoxide
Piperonyl Cyclonene
*Pyrenone Concentrates
Pyrethrum Products
Rotenone Products
INSECTIFUGE MATERIALS
*Indalone
Triple-Mix Repellents
OTHER PRODUCTS
Collodions Urethan, U.S.P.
Nitrocellulose Solutions
Ethylene

Printed in U.S.A.

brated the opening of its new showrooms June 8 with a reception to its many friends in the trade. Nathan Kasdan, founder of the business and Joseph Leshin, who has been associated with him for many years together with the staff greeted visitors. The new offices and showrooms are located at 377 Fifth Avenue, New York, N.Y.

Sales Affiliates in New Offices

Sales Affiliates, Inc., has announced the removal of its general offices to 192 Lexington Ave., New York 16, N.Y. The new telephone number is Murray Hill 6-2405. The company's shipping and receiving departments continue to operate in Waterloo, N.Y.

Isern Buys Perfume Department From Chemical Industries

Silvestre Isern has purchased the Department of Perfumes from Chemical Industries, S.A., San Jose, Costa Rica. Chemical Industries will continue to operate its pharmaceutical business. Mr. Isern had previously been associated with the firm in charge of the Perfumery Department.

ADACIOM Listens to Safety Talk

Members of the Associated Drug and Chemical Industries of Missouri were addressed by Lieutenant Roland J. Schumacher of the St. Louis Police Department, on Safety is Your Business, at their luncheon meeting June 8, at the Hotel Sheraton, St. Louis, Mo.

Purely Personal

MAURICE COUDERCHET, Bruno Court, S.A., Grasse, France, arrived by airplane in the United States June 26 for a brief visit to this country where he is well known from his long association with the Naugatuck Aromatics division of the United States Rubber Co. Most of his time while here was spent in conference with Harold J. Edmon, general manager of the division at his New York headquarters. The division is sole distributor for Bruno Court, producers of natural floral products, in the United States.

GEORGE S. McMILLAN was recently re-elected chairman of the Advertising Federation of America. CHARLES LUCKMAN was re-elected a director.

PERCY C. MAGNUS has been elected a director of the New York Eye and Ear Infirmary.

"Your Golden Chance To Be Lovely," the home permanent show conducted by Harriet Hubbard Ayer is pulling wherever it is shown. Above is a shot taken at Higbee's cosmetic counter in Cleveland.

how far does the imagination

Stretch???

. . . as far as the limits of its usefulness. A creation, born and nurtured in the mind, knows no bounds until it goes beyond its capacity for practicality. Our superior staff of product formulation experts can analyze the product of your imagination and develop it into a chemically-perfect, profitable sales item. We have the experience and reputation that come from serving America's leading private label cosmetic merchandisers for over 40 years. May we demonstrate our service to you . . . and stretch your imaginary product into a real sales hit?

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MANUFACTURERS OF PRIVATE LABEL COSMETICS SINCE 1900

Selected Book List

CONDENSED CHEMICAL DICTIONARY. *Compiled and edited by the Editorial Staff of the Chemical Engineering Catalog, under the editorial direction of Francis M. Turner.* Lists 18,000 chemicals and their synonyms, formulas, colors, properties, constants, specific gravities, melting and boiling points, solubility in water, ether and other solvents, preparation and ingredients, with process—indispensable for all who have occasion to work with chemical products or raw materials. 756 pp. $12.00 postpaid.

THE ESSENTIAL OILS, VOL. I. *By Ernest Guenther.* Covers (1) The Origin and Development of the Essential Oil Industry; (2) The Chemistry and Function of Essential Oils in Plant Life; (3) The Products of Essential Oils: Methods of Distillation, Enfleurage, Maceration and Extraction with Volatile Solvents: (a) Distillation of Essential Oils, (b) Natural Flower Oils, (c) Concentrated, Terpenless and Sesquiterpenless Oils; (4) The Examination and Analysis of Essential Oils, Synthetics and Isolates. Indispensable for up-to-date information on the chemistry, production, and analysis of essential oils. 448 pp. $6.00 postpaid.

THE ESSENTIAL OILS, VOL. II. *By Ernest Guenther.* Just off the press. This second volume gives data on several hundred of the more important constituents of essential oils. Describes the structural formulas, occurrence, methods of isolation and identification, the physico-chemical properties of these compounds. Essential oil constituents grouped according to the class of compound to which they belong: Hydrocarbons, Alcohols, Esters, Kezones, Lactones, etc. Maison G. De Navarre says: "In no other work is the treatment of essential oil constituents so complete and up-to-date." 852 pages, illustrated and indexed. $10.00 postpaid.

SYNTHETIC FOOD ADJUNCTS. *By Morris B. Jacobs,* Senior Chemist, Chief of the Chemical Bureau of Foods & Drugs, Dept. of Health, City of New York. Comprehensive handbook of information needed to make and use the colors, flavors and other synthetic adjuncts employed in the food industries. Full directions for their mixing, blending and formulation from the many hundreds of individual chemical compounds that enter into food production—including flavoring substances, coloring matters, vitamins, vitagens, preservatives, antioxidants, stabilizers, emulsifiers, etc. 335 pages. $5.50 postpaid.

THE CHEMISTRY AND MANUFACTURE OF COSMETICS. *By Maison G. Navarre.* A new kind of cosmetic book—that points the surest way to success in making any product and undertaking any problems. Everyone of its hundreds of formulas—for cosmetics of all types and all purposes—has been produced, tested, and proved to work in the author's own laboratory. 745 pages. $9.00 postpaid.

THE LAW OF FOODS, DRUGS & COSMETICS. *By Harry A. Toulmin, Jr.* Working manual of Official Government Regulations, FDA Trade Correspondence Rulings, Official Forms and Charts. Thorough analysis of the decisions relating to: False and Misleading Advertising, Unfair Competition and Misbranding, Informative Labeling. One large volume, 1460 pp. (Will be kept up-to-date with pocket supplements for modest additional charge). $17.50 postpaid.

PERFUMES, COSMETICS and SOAPS. *By William A. Poucher.*

VOL. I—DICTIONARY. Every substance used in the manufacture of perfumes and cosmetics fully described. Vol. I puts at your command wide new resources for developing new products, and for effecting economies and improvements by choosing the best of all available materials. 440 pp. $8.00 postpaid.

VOL. II—PRODUCTION, MANUFACTURE AND APPLICATION OF PERFUMES OF ALL TYPES. New edition covers in full the methods of production of perfumes, their chemistry, odor analysis, selection for various purposes, and compounding from various materials. Complete monographs explain all the floral perfumes, giving the botanical varieties, the odor classification, the chemical composition, practical suggestions for compounding, and the best ingredients. Additional chapters give many new formulas for fancy perfumes and toilet waters. 426 pp. $8.00 postpaid.

VOL. III—TREATISE ON COSMETICS. The best of present-day cosmetics explaining in detail how to prepare them from commonly available materials by easily applied methods. Shows how to vary perfumes and colors to obtain any desired result; warns against specific causes of defective products. Each chapter covers the many varieties of a type of cosmetics, and is loaded with representative formulae. The most comprehensive book now available on cosmetics—indispensable to everyone in the field. 288 pp. $7.00 postpaid.

MODERN COSMETICOLOGY. *By Ralph G. Harry.* Partial contents: Emulsions, Cleaning Creams, Milks and Lotions. Acid Creams, Face Packs and Masks, Mud Creams, Vanishing Creams, Powder Creams. Lubricating Creams. Astringents and Skin Tonics. Lipstick. Make-up. Face Powders. Sunburn and Suntan Preparations. Deodorants. Depilatories. Antitoxidants. Bath Preparations. Bath Oils and Emulsions. Foam Baths. Hand Creams and Lotions. Dental Preparations. Mouthwashes. Shaving Preparations. Hair Tonics and Lotions. Hair Creams and Fixatives. Permanent Waving Solutions. Hair Setting Lotions and Hair Lacquers. Hair Shampoos and Soapless Detergents. Manicure Preparations. Eye Lotions. Baby Preparations. Foot Preparations. Insect-Bite Preparations. Humectants. Acne Preparations. Coloring of Cosmetic and Toilet Preparations. 514 pp. $12.00 postpaid.

MODERN COSMETICS. *By E. G. Thomssen.* Contents: Cosmetic Classification, Face Powder, Creams, Lotions, Deodorants, Bath Preparations, Make-up Preparations, Rouges, Eye Preparations, Lipsticks, Suntan Preparations, Hair Preparations, Hair Waving Preparations, Shaving Media, Dentifrices, Miscellaneous Cosmetics, Perfumes, Machinery and Equipment for Cosmetics, Packaging Equipment and Factory Layout. 644 pp. $8.00 postpaid.

NATURAL PERFUME MATERIALS. *By Y. R. Naves and G. Mazuyer.* Describes the raw materials used in the extraction, choice, purification and recovery of volatile solvents; the preparation of tinctures and infusions; the treatment of concretes; resins and balsams; the extraction of the aromas of fruits and distilled flower waters; the manufacture of pomade and perfumed oils by the use of vegetable and animal fats and mineral oils, properly chosen and prepared; the processes of digestion and enfleurage on solid and liquid absorbents; and the extraction of decolorized absolutes and pomades from the diffused products. Contains much information on the chemical composition and analytical examination of extraction products; descriptions of plant and raw materials subjected to extraction. 355 pp. $6.75 postpaid.

When ordering send check or money order to

MOORE PUBLISHING CO., Book Dept.

9 EAST 38th ST., NEW YORK 16, N. Y.

WILLIAM RAND was elected chairman of the board of Manufacturing Chemists Association at its annual meeting June 2-3. At the same time, GEORGE MERCK became president.

Over 7,000 visitors saw the RICHARD HUDNUT exhibit at the American Medical Association Convention in Atlantic City, N.J., June 6-10.

A special new television make-up for adolescent boys was introduced by HELENA RUBINSTEIN at the Rotary International Convention held recently in New York.

MONSANTO CHEMICAL CO. has announced the removal of its Washington office to the Rust Building, 15th and K Sts., N.W., Washington, D.C.

THERTON G. FRYER has been made director of sales research for Lamont, Corliss & Co.

PARFUMS SCHIAPARELLI, INC., has appointed Arthur G. Hadley as vice-president and general sales manager. He was formerly Pacific Coast representative.

The telephone number of MIRIAM GIBSON FRENCH has been changed to Plaza 5-3860.

DR. ALBERT B. PACINI has become a consultant with Warburton, Moss & Co.

In the April issue of *Archives of Dermatology* a report on clinical work done by Dr. J. J. Eller at New York City Hospital on hormone creams appeared. The work was done for BONNIE BELL on its Plus 30 cream.

M. F. CHARLEY, president of Standard Pharmacal Co., Chicago, Ill., has been appointed a member of the Chicago Plan Commission by Mayor Kennelley.

SHULTON has announced a concentrated Fall and Christmas advertising campaign lasting from September through December.

BLANCHE GENET has been appointed executive assistant to Mala Rubinstein, director of salons for Helena Rubinstein, Inc.

IDA F. MILLER, DEE T. BASS and ELAINE L. COREN have announced the formation of Packaged Publicity and Promotion. The new firm will specialize on individual publicity and promotion jobs.

DANA RHINES has been made general sales manager of Cigogne, Inc., importer of Parfums Le Galion.

HARRY GOODRICH is retiring after twenty-one years as vice-president of Pacquin, Inc.

DAVID BENSON has been made manager of the Metropolitan Territory, comprising New York City and surrounding area, for Shulton.

CARL GARDINER has become executive vice-president and general manager of the Elizabeth Arden Sales Corp.

SULTRA is being backed by a $100,000 advertising campaign.

RUSSELL L. BAUER has been made manager of the process section of the General Engineering Department of Monsanto Chemical Co.

GERARD J. DANCO, INC.

5 East 19th St. New York, 3, N. Y.

Telephone: Oregon 3-6790 Cable Address: Codan, N. Y.

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- MUSK - CIVET - AMBERGRIS

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"Danco Quality Guaranteed by Reputation"

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there is no
finer
cosmetic
container

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Top off
YOUR BOTTLE OR JAR with a
RICHFORD METAL CLOSURE
Any Size Plain or Embossed Any Shape
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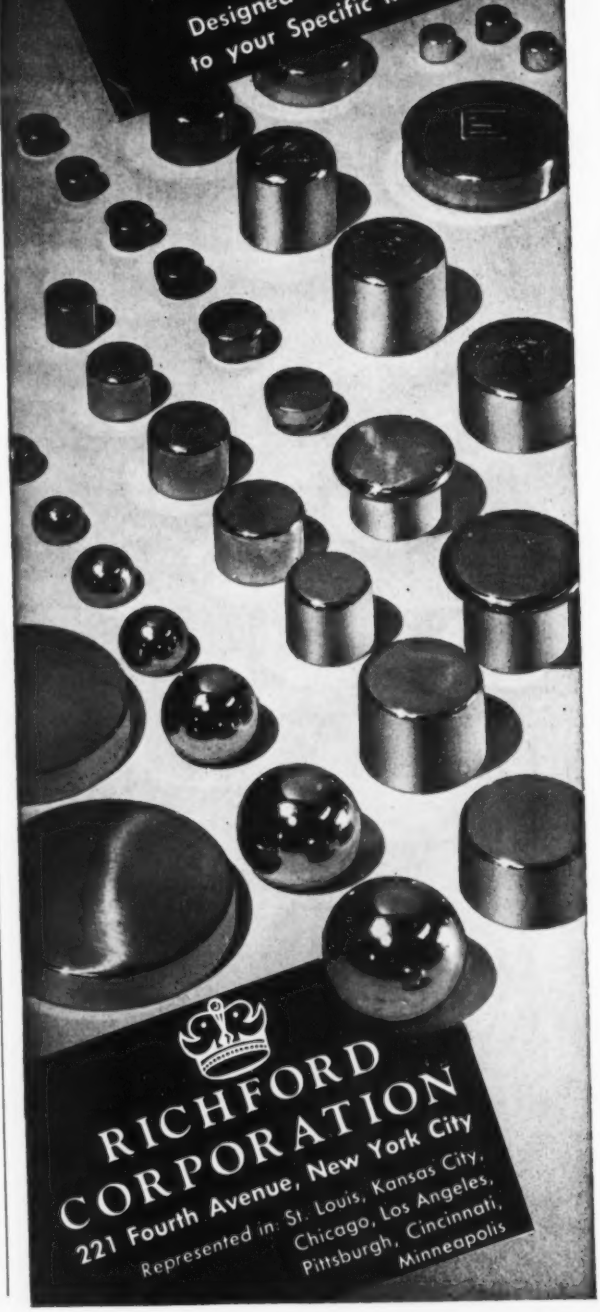

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Minneapolis

WILLIAM S. FAIRHURST of Tombarel Products Corp., New York, N.Y., has returned from Los Angeles, California where he attended a family reunion. It was Mr. Fairhurst's first trip to Los Angeles in ten years and it was also his first commercial flight, the trip both ways being made by airplane.

HELENE CURTIS has made Milky Shampoo available to the public through drug and department stores.

E. LESLIE HOUSTON, formerly vice-president and general manager of Helfrich Laboratories of Canada, Ltd., has joined E. and A. Martin Research, Ltd. Mr. Houston will be in charge of the Private Label Cosmetic Division.

JOHN P. CONRAD has been appointed contact representative for all Government agencies by Antara Products, General Aniline & Film Corp.

ANNE WRIGHT has retired as vice-president and general sales manager of Parfums Schiaparelli, Inc. Her future plans will be made known at the end of the year.

EUGENE N. WEST has been made sales manager of Lehn & Fink Products Corp.

COUNTESS MARITZA COSMETIC CO. is starting an extensive national advertising campaign in cooperation with the motion picture industry for its latest line, "Silent Night."

DR. HENRY GOLDSCHMIDT has joined the staff of the Mem Co., Inc., New York, N.Y., as chief chemist and production manager. In his new position, Dr. Goldschmidt will improve old formulae and develop new products.

JOSEPH P. RYAN has joined Daggett & Ramsdell as sales manager for department, chain and independent drug stores.

EDWIN W. KAVANAGH of the West Virginia Pulp & Paper Co., New York, N.Y., former chairman of the Drug, Cosmetic & Chemical Credit Men's Association, is receiving the congratulations of a host of friends on the brilliant record made by his son Raymond E. Kavanagh who was graduated from St. Johns College June 12 summa cum laude. He will continue his studies working for a master's degree.

WALLY WICK, executive vice president of Kolmar Laboratories and G. I. Entringer, controller, are in Canada for the purpose of bringing the Canadian manufacturing operations under the control of Kolmar Laboratories. Improvements will be made in the plant at Oakville. Rolland Klamert will be in charge of manufacturing and Frederick Wilckens, president, will devote most of his time to sales.

Obituary

Saul Davis

As we go to press, word has reached us of the death of Saul Davis, Davis Laboratories, Chicago, Ill. Before going into business for himself, Mr. Davis was associated with some of the leading essential oil houses in this country.

OIL ORRIS ROOT LIQUID ABSOLUTE

ORRIS CONCRETE

ORRIS OLEORESIN *(Resinoid)*

Experience demonstrates that none of the substitutes for Orris are wholly satisfactory in giving the characteristic Orris note. It is therefore fortunate that these well known Bush specialties are now readily available.

W. J. BUSH & CO., Inc.

ESSENTIAL OILS . . . AROMATIC CHEMICALS . . . NATURAL FLORAL PRODUCTS

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Use

NORTHWESTERN ETHYL BUTYRATE

when this ester is called for in your formulae.

For many years more than half of the Ethyl Butyrate sold in this country has been manufactured by us — proof of the fine quality of our product.

THE LARGEST MAKERS OF BUTYRIC ETHER IN THE WORLD

The NORTHWESTERN CHEMICAL CO.

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Essential Oils *Aromatic Chemicals*

DESCOLLONGES PRODUCTS

MUGUET FLEURS A

The perfect synthesis of the exquisite lily-of-the-valley perfume has been accomplished in our essence Muguet Fleurs A.

LILAC FLEURS B

A fine reproduction of the perfume of the fresh Lilac Blossom at a very reasonable cost.

160 FIFTH AVENUE NEW YORK 10, NEW YORK

MARKET REPORT

Market Trends Mixed

WHILE reports indicate that synthetic glycerin production will reach capacity in July, production of natural material is expected to decline by more than 5,000,000 pounds as two large refiners are closing down for a two weeks vacation period. However, July sales are likely to be off somewhat.

Pricewise the raw materials market displayed a mixed trend over the past month, and because of general economic conditions it is becoming increasingly difficult to obtain a clear picture of outlook for the third quarter.

ALCOHOL PRICES UP

After announcing intentions of advancing prices on June 14th alcohol schedules were boosted by producers from 8 to 11 cents a gallon July 1 thus representing the first advance in the market since last September. Isopropyl alcohol was also marked up to the extent of 5½ cents a gallon. Other major price movements included a reduction of 25 cents a pound in coumarin by the Monsanto Chemical Company, and a drop of 75 cents a pound in California coldpressed orange oil. The reduction in coldpressed orange oil was announced by the California Fruit Growers Exchange. It marked the first change in the market since December. With the heavy consuming season well under way, major suppliers seem particularly anxious to encourage the use of this oil, especially since it is regarded as one of the most popular flavors in the soft drink trade. The downward trend in orange oil was partly offset, however, by a strong and advancing market in lime oil. Local houses found their stocks of old crop lime oil rapidly dwindling and realized that supplies of new crop oil would appear too late in the consuming season to have any influence upon the market. Prices on lemon oil remained fairly steady throughout the period under review with local dealers pointing to a good seasonal demand for the article.

Prices on mint oils slipped off somewhat because of new crop influences but toward the close the market turned firmer on advices from Michigan regarding killing frosts in the St. Johns area. Although this area accounts for only about ten per cent of the total year's production of oil, nevertheless, major suppliers immediately adopted a cautious policy pending more detailed advices from the country. A much stronger situation developed in spearmint because of reports to the effect that this year's production is likely to be considerably below last year.

The reduction in coumarin made possible by savings realized in production costs represented the first change in the item since March, 1948. Production of synthetic coumarin is placed at approximately 500,000 pounds a year. The article enjoys a demand for the account of perfumers, the tobacco and soap trades, and from extract manufacturers.

Purchases of aromatic chemicals continued to be restricted to small lots to meet the immediate or nearby requirements of consuming manufacturers. The overall supply position of the market remained firm with no spectacular price movements to report.

With but few exceptions the group of seed and spice oils were featured by a generally strong tone. Oil black pepper registered a sharp advance in keeping with a strong and excited market in the spice. Prices on wormseed moved upward under the influence of a reasonably good demand and the situation in both ginger and cardamom was very firm.

Trade factors are looking forward to a continued firm market in several oils that are imported from the Island of Reunion including geranium, vetiver and ylang. Offers from the primary center were generally limited and a seasonal upturn in buying over the latter part of the current quarter could bring about a further tightening in the supply picture accompanied by still higher prices.

Some fair size quantities of Formosan citronella oil have been arriving here for use in the manufacture of synthetic menthol. Very little Java citronella oil is obtainable here and dealers with small quantities of Java type citronella oil are not very anxious to sell goods.

The chaotic conditions in China failed to have any material influence upon cassia or anise oil.

In the chemical group, the extended period of warm weather served to bring about a seasonal upturn in the demand for citric acid, the tartrates and sodium benzoate. Closing prices on USP zinc oxide are considerably under those prevailing a month ago.

MENTHOL TURNS EASY

After a sharp rise to $11.35 a pound, menthol turned easier toward the close of last month. For a period of several months menthol has been arriving here at the rate of about ten tons a week. While some observers point out that a good portion of these receipts have gone directly to consumers, nevertheless the shipments should tend to lessen the pressure of demand later in the year when the heavy consuming season arrives. Absence of firm offerings here could be attributed to a belief on the part of some trade factors that prices would continue to advance. Toward the close some purchases of Chinese menthol were reported on the basis of $10 per pound cost and freight Hong Kong for prompt shipment. The latter figure is equivalent to about $10.65 per pound duty paid.

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FFPA	4.00@	4.75
Sweet True	.85@	1.00
Apricot Kernel	.50@	.58
Amber, rectified	Nominal	
Angelica Root	135.00@	175.00
Anise, U. S. P.	.80@	1.00
Aspic (spike) Span.	1.00@	1.65
Avocado	1.10@	1.50
Bay	1.25@	2.00
Bergamot	3.95@	4.25
Artificial	2.10@	3.00
Birch, sweet	2.50@	7.50
Birchtar, crude	1.00@	1.35
Birchtar, rectified	4.00@	4.75
Bois de Rose	2.85@	3.05
Cade, U. S. P.	.40@	.65
Cajeput	2.00@	2.50
Calamus	20.00@	25.00
Camphor "white" dom.	.40@	.60
Cananga, native	2.10@	2.85
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Cardamon	48.50@	52.00
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U. S. P.	2.00@	2.25
Cedar wood	.40@	.55
Celery	15.00@	16.00
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Cinnamon bark oil	35.00@	43.00
Citronella, Ceylon	.80@	1.00
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Cloves, Zanzibar	1.30@	1.50
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Cumin	6.75@	7.40
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Eucalyptus	.65@	.90
Fennel, Sweet	2.85@	3.25
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(Continued on page 83)

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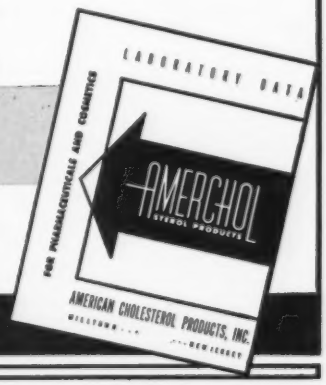

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Peru	.90@	1.05
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U. S. P.	.70@	.73
Yellow, refined	.61@	.63
Bismuth, subnitrate	2.30@	
Borax, crystals, carlot ton	61.25@	81.25
Boric Acid, U. S. P., ton	129.00@	133.50
Calcium, phosphate	.08@	.08¾
Phosphate, tri-basic	.0660@	.0730
Camphor pwd., domestic	.72@	.74
Castoreum, nat., cans	10.50@	12.50
Cetyl, Alcohol	1.50@	1.55
Chalk, precip. bags, clts	.02⅞@	.03
Cherry Laurel Water, jug, gal.	1.50@	2.00
Citric Acid	.24½@	.26½
Civet, ounce	5.50@	15.00
Cocoa, Butter, bulk	.39@	.42
Cyclohexanol (Hexalin)	.21½@	.22
Fuller's Earth, Mines ton	27.00@	30.00
Glycerin, C. P.	.24¾@	.25¼
Gum Arabic, white	.33@	.35
Amber	.12@	.13¾
Gum Benzoin, Siam	3.50@	3.85
Sumatra	.42@	.50
Gum Galbanum	.95@	1.00
Gum Myrrh	.38@	.42
Henna, pwd.	.25@	.27
Kaolin	.05@	.07
Labdanum	5.00@	7.00
Lanolin, hydrous	.29@	.30
Anhydrous	.31@	.32
Magnesium, carbonate	.11@	.12¼
Stearate	.35@	.37
Musk, ounce	25.00@	55.00
Olibanum, tears	.26@	.35
Siftings	.11@	.13
Orange Flower Water, gal.	1.75@	2.25
Orris Root, Italian	.24@	
Paraffin	.05¾@	.07¼
Peroxide (hydrogen U. S. P.) bbls.	.03¾@	.05
Petrolatum, white	.06¾@	.08⅜
Quince Seed	1.20@	1.50
Rice Starch	Nominal	
Rose flowers, pale	.40@	.50
Rose Water, jug (gal.)	2.25@	3.00
Rosin, M. per cwt.	7.45@	
Salicylic Acid	.40@	.42
Saponin No. 1	2.45@	
Silicate, 40°, drums, works, 100 pounds	1.00@	1.35
Sodium Carb. 58% light, 100 pounds	1.60@	2.70
Hydroxide, 76% solid, 100 pounds	3.05@	4.20
Spermaceti	.35@	.37
Stearate Zinc U.S.P.	.34@	.36
Styrax	1.40@	1.85
Tartaric Acid	.34½@	.35
Tragacanth, No. 1	2.85@	3.40
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Corn Oil, refined, tanks	.13¼@	.13¾
Cottonseed, crude, tanks	.09½@	.10
Grease, white	.05¾@	
Lard, Chicago	.11½@	.11¾
Lard Oil, common, No. 1 drums	.10¾@	.11¼
Palm Congo drums	.16½@	
Peanut, refined, tanks	.14¾@	.15
Red Oil, single distilled drums	.12½@	.13½
Stearic Acid		
Triple Pressed	.16¾@	.17¾
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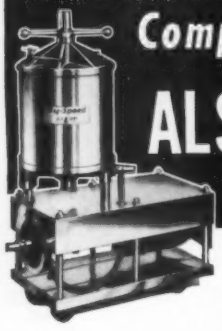

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